

Reservoir Annual 1984

Saskatchewan

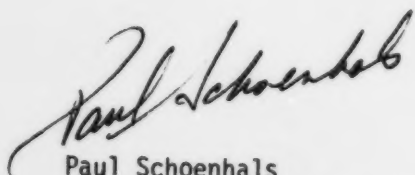


PREFACE

The 1984 Reservoir Annual has been compiled to consolidate pertinent information on all oil and gas reservoirs in Saskatchewan into a convenient reference manual. The main sections of the report contain oil and gas reserves data, development and producing data and information concerning enhanced recovery projects. The remaining sections present related reservoir information.

Publication of the Reservoir Annual commenced in 1963 and has since undergone a number of changes to improve the presentation and to increase the amount of information that is useful to both industry and government.

I would like to acknowledge the assistance of the oil and gas companies operating in Saskatchewan for submitting to the department much of the material that has been used in the preparation of this report.

A handwritten signature in dark ink, reading "Paul Schoenhals". The signature is written in a cursive, flowing style with a large initial "P".

Paul Schoenhals
Minister of Energy and Mines

Although the Department of Energy and Mines has exercised all reasonable care in the compilation, interpretation and production of this report, it is not possible to ensure total accuracy, and all persons who rely on the information contained herein do so at their own risk. The Department of Energy and Mines and the Government of Saskatchewan do not accept liability for any errors, omissions or inaccuracies that may be included in, or derived from, this report.

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INTRODUCTION



INTRODUCTION

The 1984 Reservoir Annual is published by Saskatchewan Energy and Mines to provide current statistical information with regard to performance and reservoir parameters of Saskatchewan oil and gas pools. The 1984 edition is subdivided into eleven sections, each dealing with a specific type or aspect of reservoir data. Section B presents maps showing oil and gas pools, production and disposition areas, well spacing areas and other related information. Of considerable importance are sections C and D, which provide reservoir data and reserves for all provincial oil and gas pools broken down by unit and non-unit areas. Section E contains a listing of oil and gas units and enhanced recovery projects and provides such information as project operator, producing zone, number of active wells and injection data such as pattern type, commencement date and injection rates. The section titled 'Development and Producing Data' presents information such as well spacing, depletion mechanism, capable and active wells and average production rates for Saskatchewan oil and gas pools. The remaining five sections include illustrations of typical producing well logs, pool pressure data, Maximum Permissible Rate factors, gas plant performance plots and formation water resistivity measurements. All reserve, production, pool boundary and well spacing information contained in this publication is as of December 31, 1984, unless otherwise noted.

The reserve values contained in the Reservoir Annual are "established reserves" as adopted from the recommendations of the Joint Industry/Government Task Force on Uniform Reserves Terminology. Established reserves are defined as those reserves recoverable under current technology and present and anticipated economic conditions, specifically proved by drilling, testing or production, plus that judgement portion of contiguous recoverable reserves that are interpreted to exist from geological, geophysical or similar information, with reasonable certainty.

Provincial oil production in 1984 was just under 10.8 million cubic metres, an increase of more than 1.2 million cubic metres over 1983 production. This figure has not exceeded 10 million cubic metres since 1974 and is an indication of the record number of new well completions and the good crude oil market conditions during the year. Initial oil reserves increased by over 16.4 million cubic metres in 1984, due almost entirely to the record provincial total of 2970 wells drilled during the year. The majority of this activity was again in Area II (Kindersley) and Area IV (Weyburn-Estevan) but increases were also noted in the other areas. For the second year in a row, the province has recorded a net increase in remaining oil reserves. The reserve additions exceeded production by almost 5.7 million cubic metres resulting in remaining established reserves of nearly 108 million cubic metres at year end. Table I provides a more detailed look at changes in oil reserves for the year.

Natural gas production in 1984 was 1.63 billion cubic metres, exceeding the 1983 production of 1.22 billion cubic metres by over 33%. Initial reserves of gas were increased by 11.41 billion cubic metres in 1984, resulting in a net increase of 9.77 billion cubic metres in remaining reserves to a year-end value of 58.24 billion cubic metres. These reserve increases were largely due to the continued high rate of gas well drilling in 1984.

The objective of this publication is to provide subscribers in the oil and gas industry with reliable and pertinent information on provincial oil and gas resources and any suggestions or comments on improvements in this regard would be welcomed by Saskatchewan Energy and Mines.

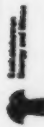
TABLE I
REMAINING OIL RESERVES IN SASKATCHEWAN
(Million Cubic Metres)

	Remaining Established Reserves (Dec. 31/83)	1984 Additions to Reserves			1984 Production	Net Change in Reserves During 1984	Remaining Established Reserves (Dec. 31/84)
		Revisions	Drilling	Total			
Area I - Heavy	26.029	+0.552	+3.467	+4.019	2.780	+1.239	27.268
Area II - Heavy	6.820	+1.907	+0.685	+2.592	0.801	+1.791	8.611
Area II - Light	6.877	-0.509	+3.418	+2.909	0.950	+1.959	8.836
Area III - Medium	15.341	+0.489	+0.568	+1.057	1.811	-0.754	14.587
Area IV - Medium	25.145	-2.094	+3.340	+1.246	1.949	-0.703	24.442
Area IV - Light	21.906	+0.684	+3.943	+4.627	2.502	+2.125	24.031
PROVINCIAL TOTAL	102.118	+1.029	+15.421	+16.450	10.793	+5.657	107.775

POOL AND AREA

MAPS





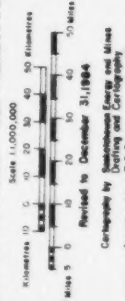
MINERAL DEVELOPMENT MAP

OF

SOUTHERN SASKATCHEWAN

LEGEND

- Storage Caverns (LPG, N.G.)... Oil Refineries
- Commercial Coal Areas... Electrical Generating Stations
- Oil Pools... Bentonite Plants
- Gas Pools... Gas Conservation Plants
- Well Spacing Areas... Potash Shaft Mine
- Commercial Potash Areas... Potash Solution Mine
- Oil, LPG and Refined Products Pipelines... Sodium Sulphate Plants
- Gas Pipe Lines... Sodium Sulphate Deposits
- ... Salt Plants



Revised to December 31, 1964

Cartography by Saskatchewan Energy and Mines

Dating and Cartography

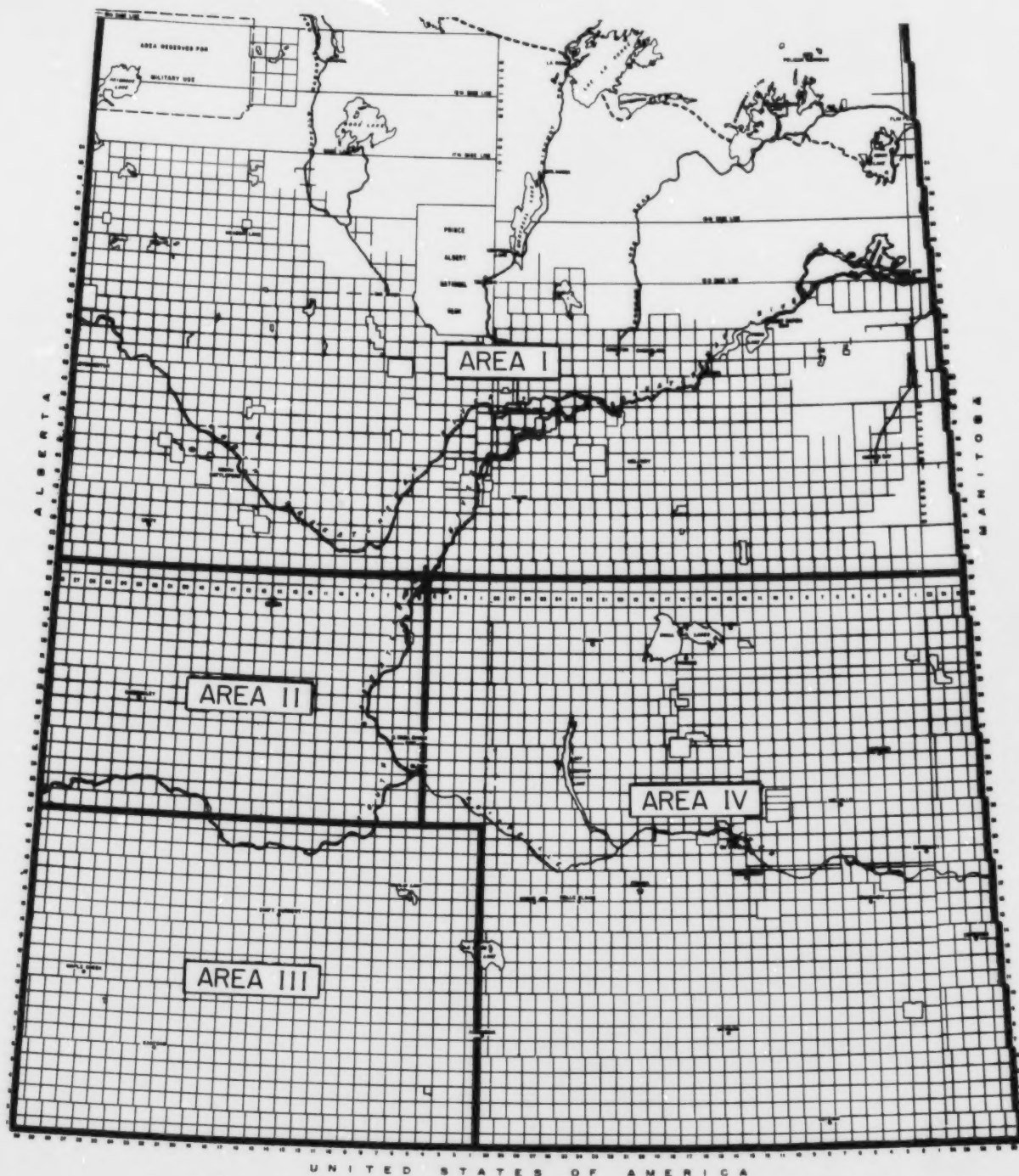
Amateur revision, R.O. Plonka

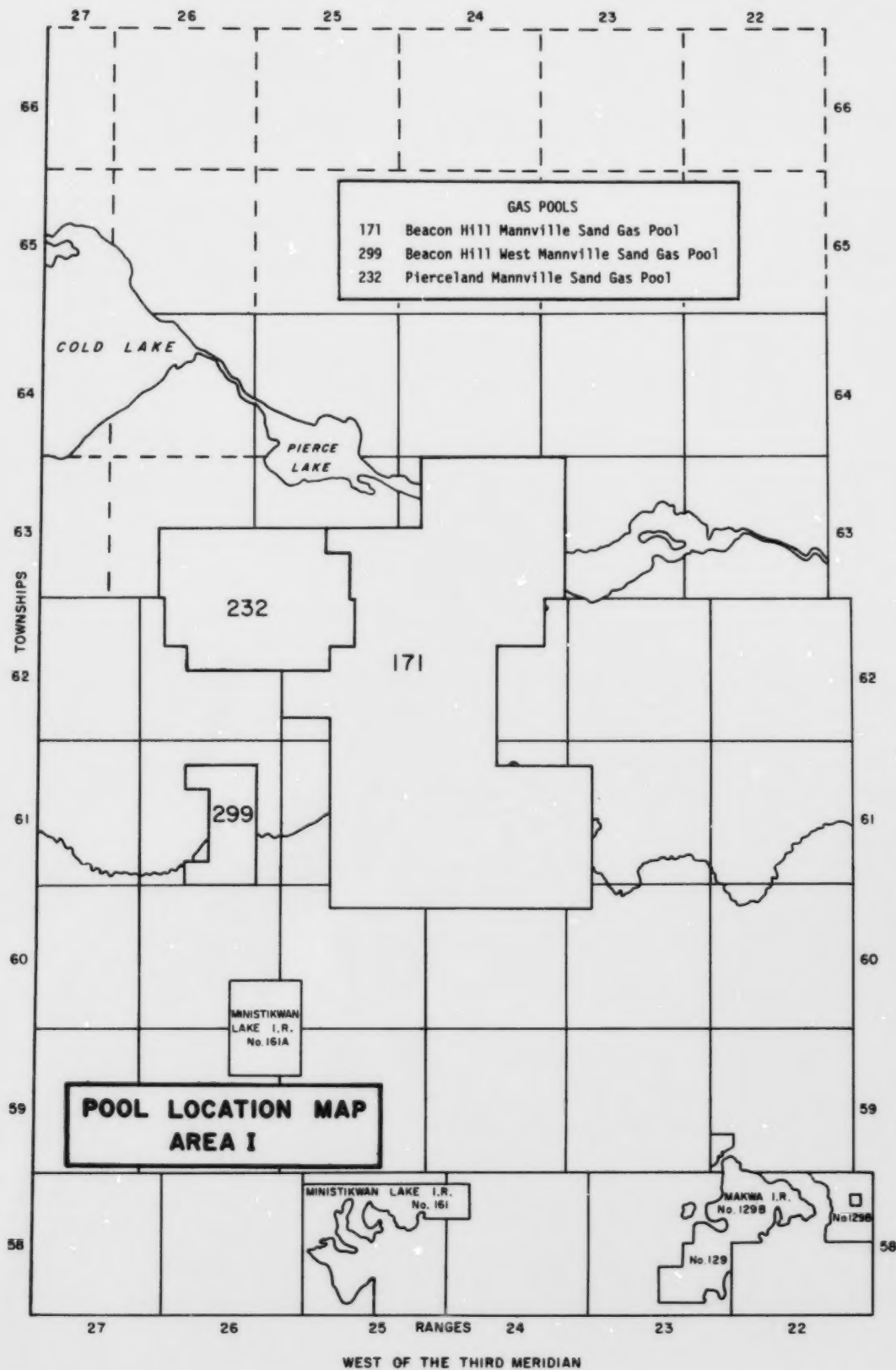


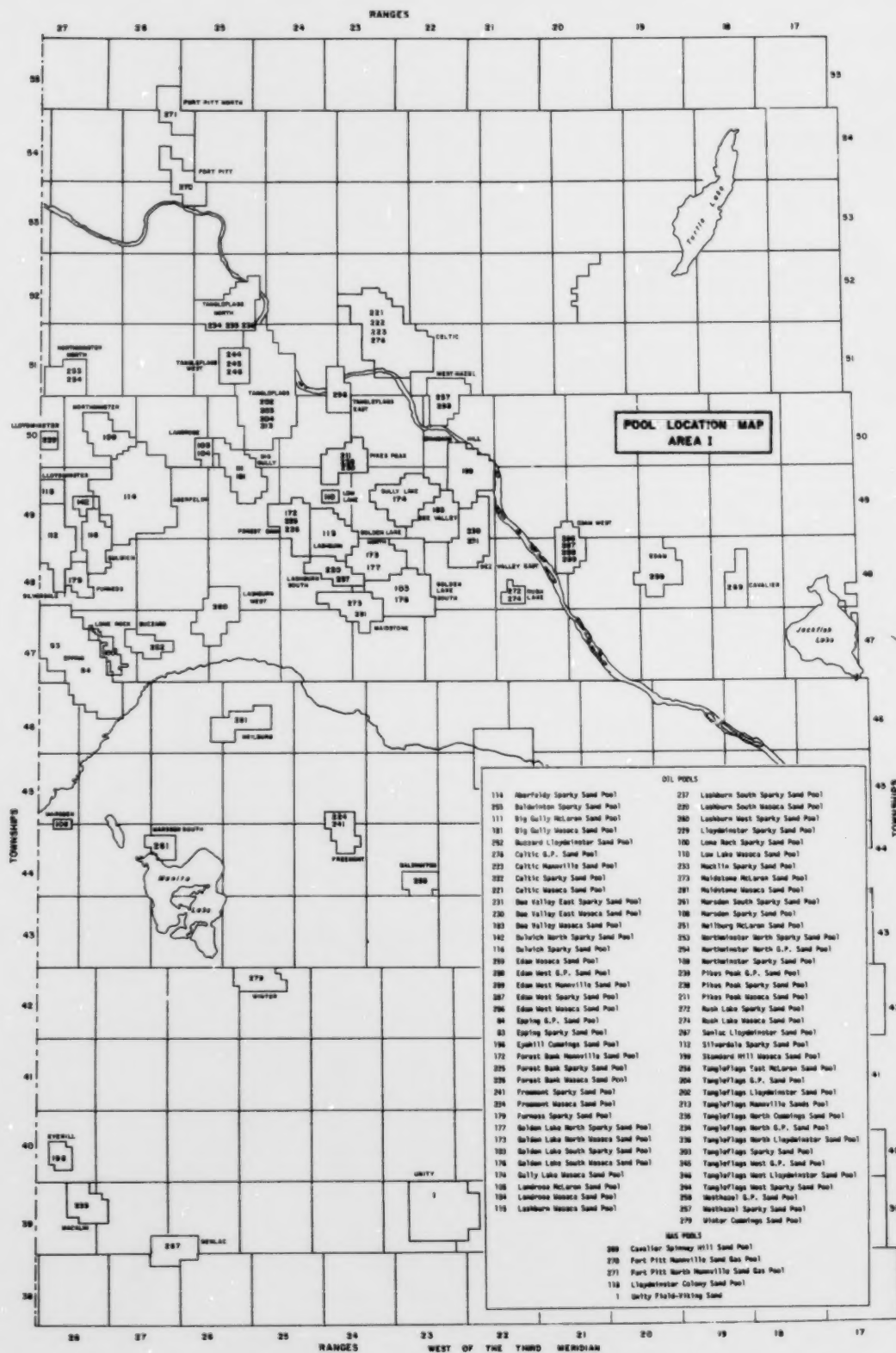
SASKATCHEWAN
PETROLEUM AND NATURAL GAS
PRODUCTION AND DISPOSITION AREAS

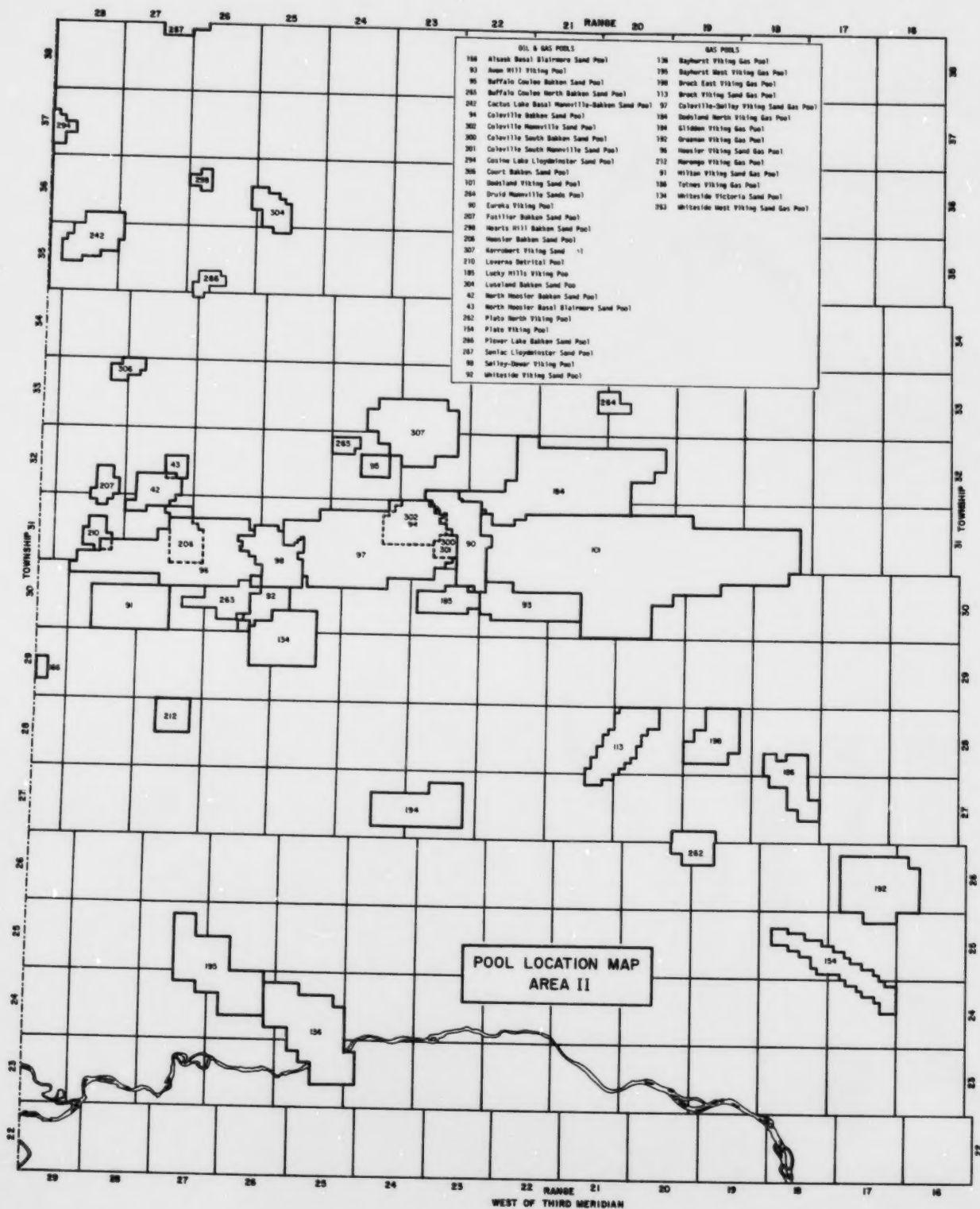
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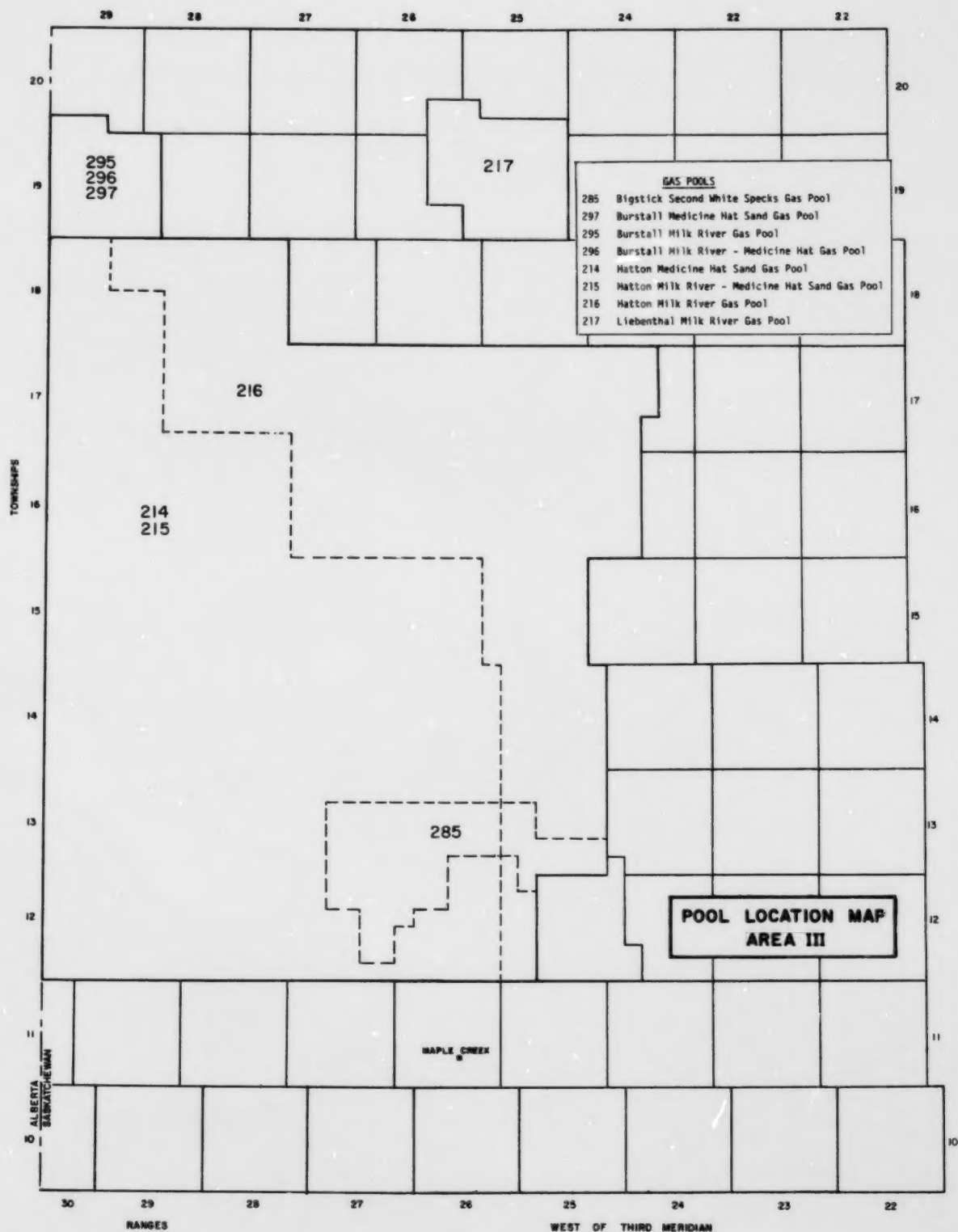
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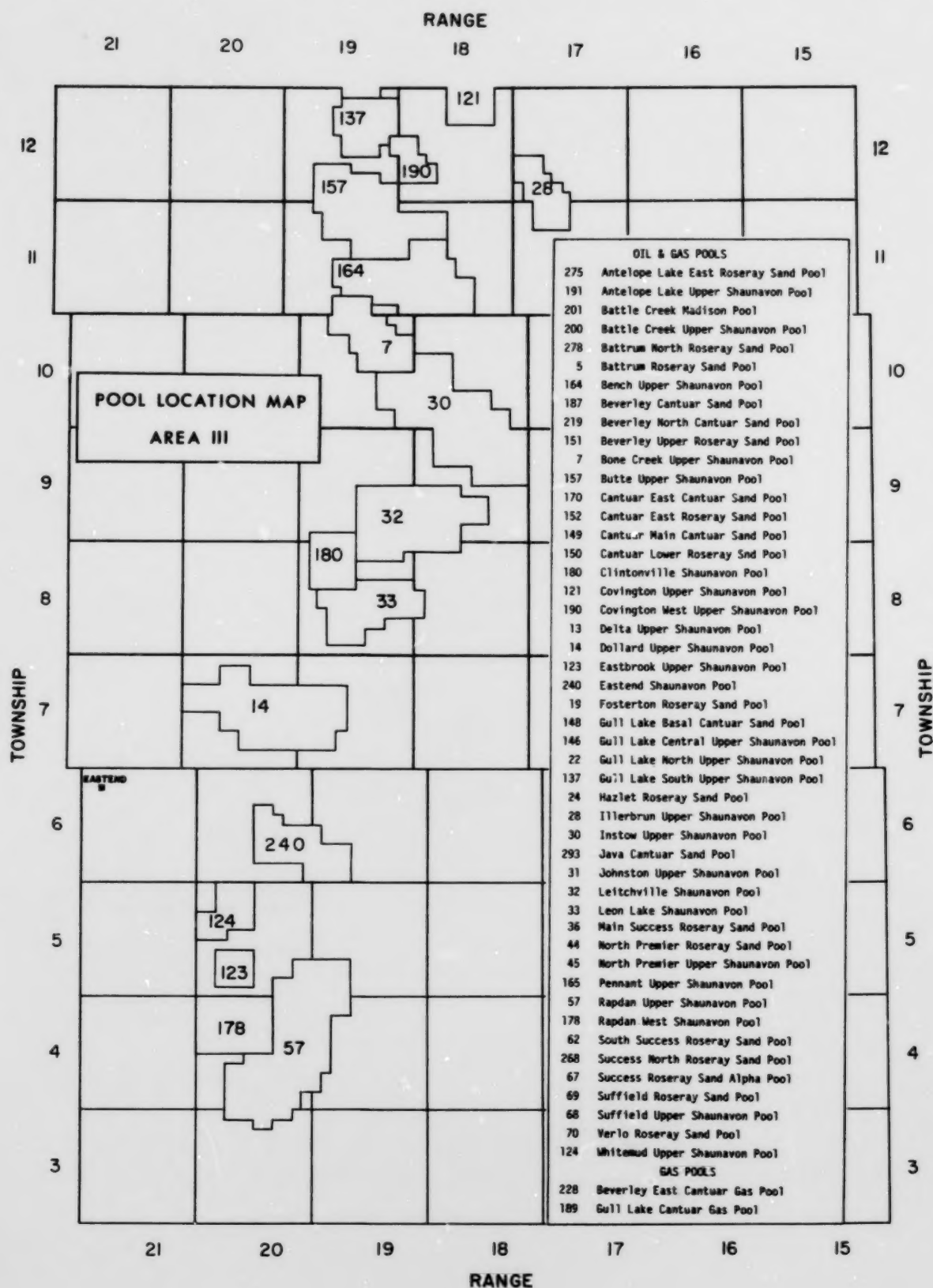


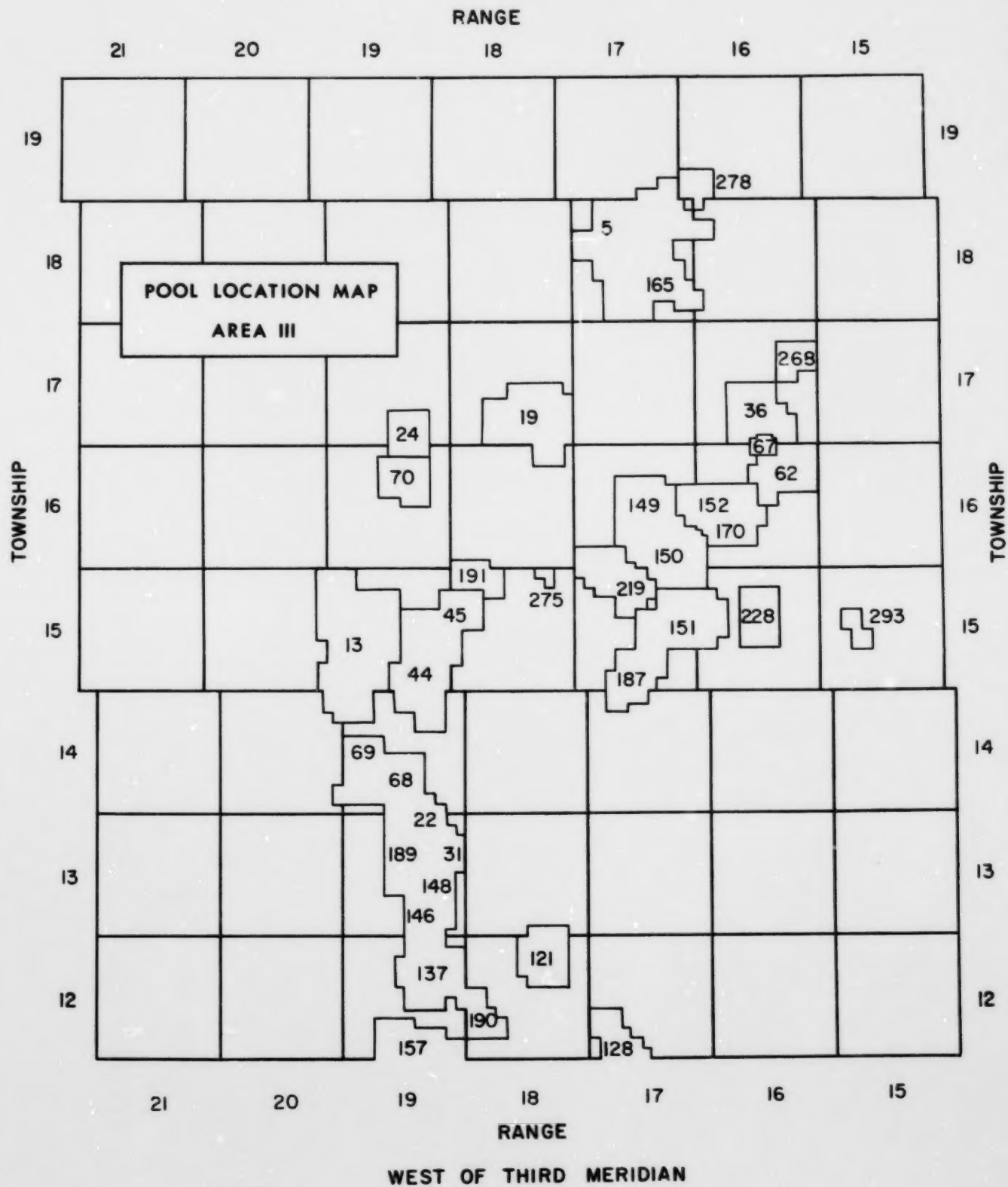


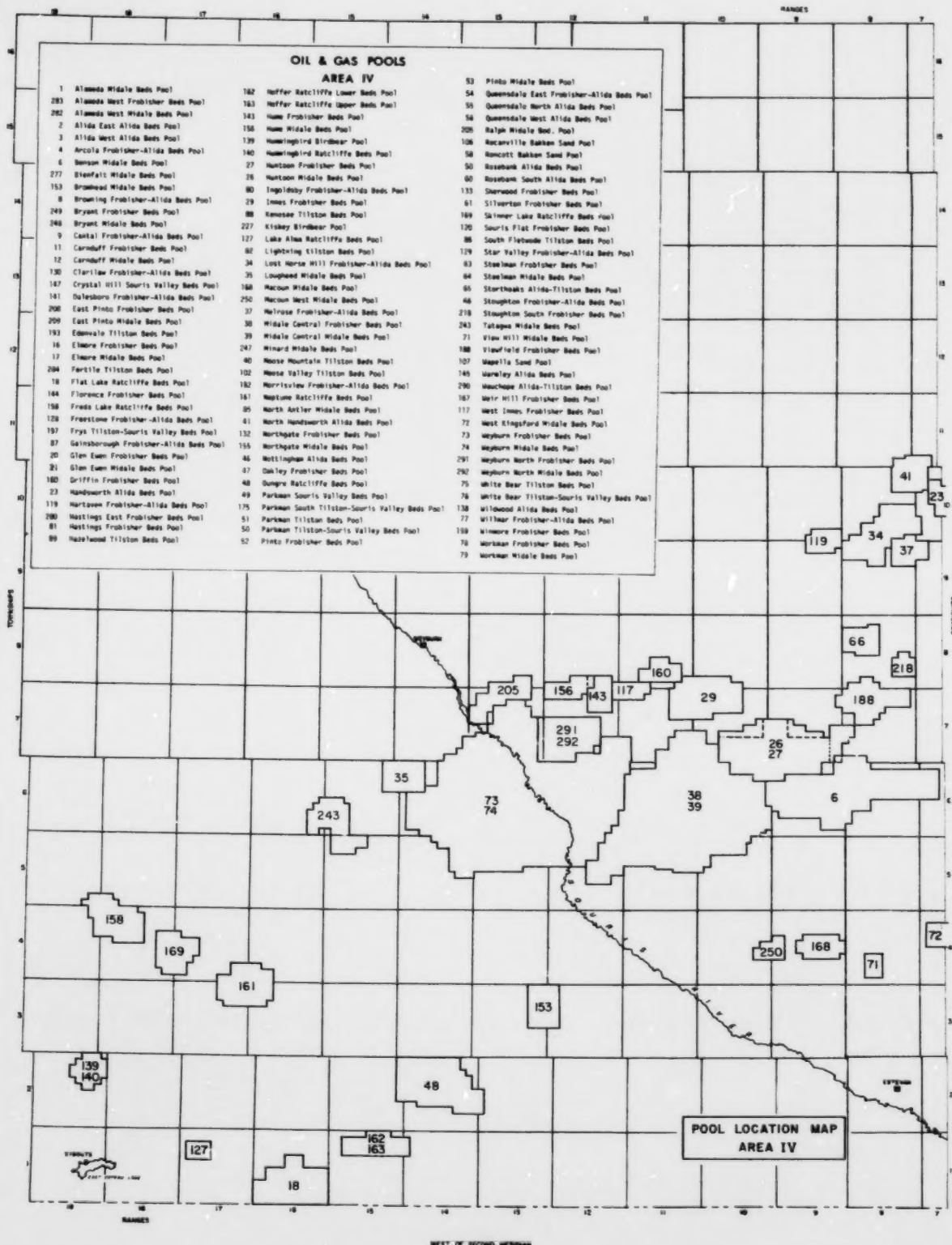


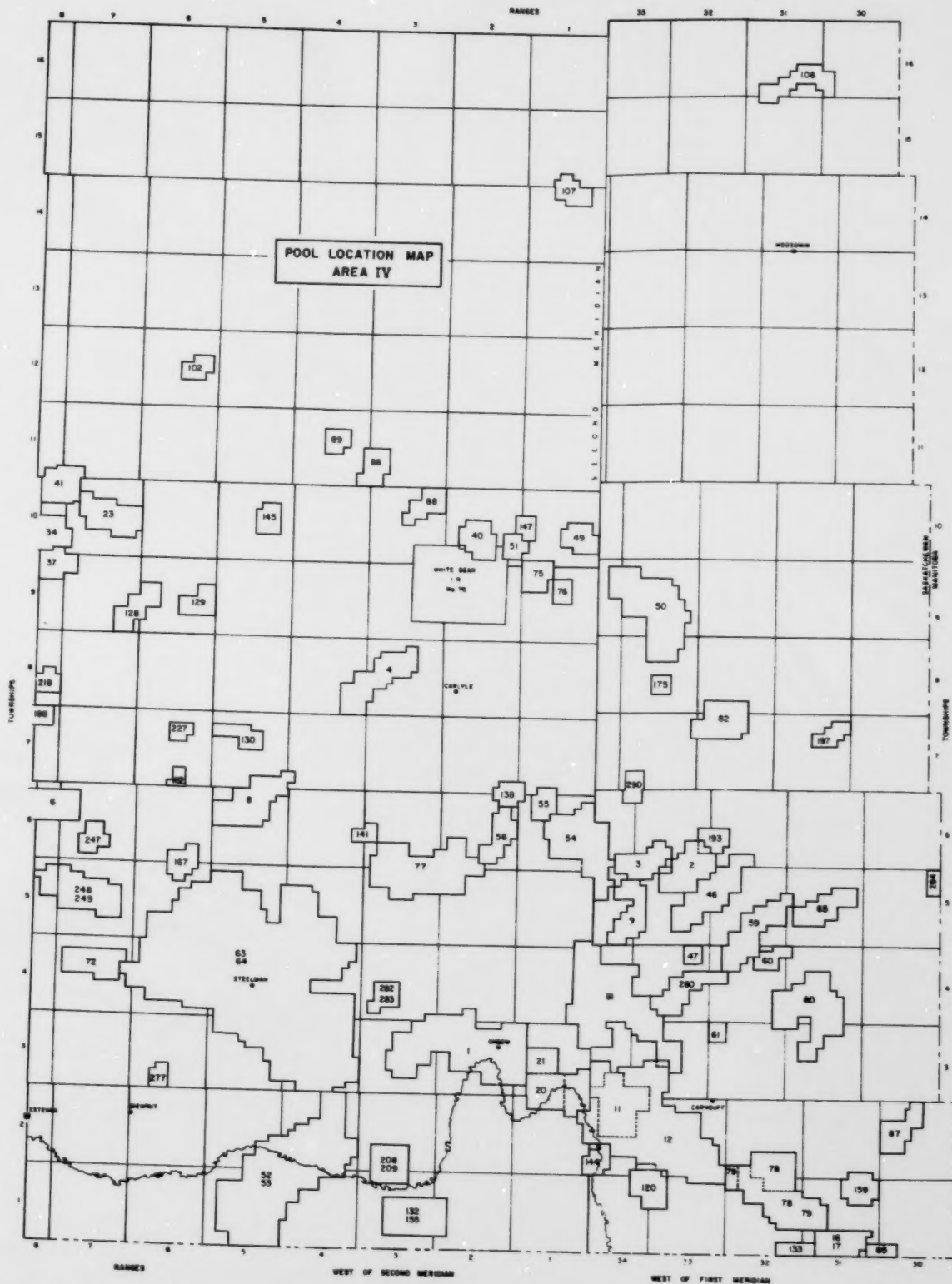












RESERVOIR DATA

RESERVES AND

PRODUCTION - OIL



FIVE YEAR OIL SUMMARY

	1980	1981	1982	1983	1984
INITIAL RECOVERABLE RESERVES (Million Cubic Metres)					
Area I - Heavy	48.351	49.697	51.910	57.176	61.198
Area II - Heavy	11.970	14.009	15.362	16.146	18.740
Area II - Light	16.513	16.732	17.507	19.299	22.208
Area III - Medium	88.345	88.486	88.965	89.635	90.700
Area IV - Medium	102.713	102.606	98.776	100.593	101.844
Area IV - Light	111.379	111.729	116.510	119.565	124.200
PROVINCIAL TOTAL	379.271	383.259	389.030	402.414	418.890
REMAINING RECOVERABLE RESERVES (Million Cubic Metres)					
Area I - Heavy	23.774	23.073	23.233	26.029	27.268
Area II - Heavy	4.612	6.082	6.765	6.820	8.611
Area II - Light	5.737	5.466	5.757	6.877	8.836
Area III - Medium	18.406	17.225	16.292	15.341	14.587
Area IV - Medium	29.808	28.095	24.990	25.145	24.442
Area IV - Light	21.677	20.644	21.226	21.906	24.031
PROVINCIAL TOTAL	104.014	100.585	98.263	102.118	107.775
YEARLY PRODUCTION (Million Cubic Metres)					
Area I - Heavy	1.989	2.039	2.051	2.479	2.780
Area II - Heavy	0.391	0.565	0.672	0.730	0.801
Area II - Light	0.492	0.490	0.486	0.670	0.950
Area III - Medium	1.973	1.310	1.422	1.622	1.811
Area IV - Medium	2.231	1.611	1.702	1.704	1.949
Area IV - Light	2.254	1.377	1.771	2.330	2.502
PROVINCIAL TOTAL	9.330	7.392	8.104	9.535	10.793
NUMBER OF PRODUCING WELLS					
Area I - Heavy	2 285	2 206	2 454	2 733	3 015
Area II - Heavy	388	540	579	640	697
Area II - Light	1 128	1 178	1 398	1 856	2 656
Area III - Medium	929	903	906	948	1 042
Area IV - Medium	1 576	1 519	1 487	1 604	1 873
Area IV - Light	2 048	1 564	2 137	2 330	2 615
PROVINCIAL TOTAL	9 354	7 910	8 961	10 111	11 898
AVERAGE DAILY PRODUCTION (Cubic Metres Per Day)					
Area I - Heavy	5 679	5 525	6 163	7 043	7 730
Area II - Heavy	1 165	1 670	1 925	2 037	2 127
Area II - Light	1 454	1 334	1 564	2 054	2 824
Area III - Medium	5 470	4 390	4 794	4 629	4 495
Area IV - Medium	5 974	5 542	4 780	5 011	5 479
Area IV - Light	6 161	3 019	6 689	6 388	7 251
PROVINCIAL TOTAL	25 903	21 480	25 913	27 163	29 906

POOL	INITIAL OIL IN PLACE 3 M x1 000 000	ESTIMATED RECOVERY PRIMARY ENHANCED PER CENT	TOTAL	INITIAL RESERVES PRIMARY ENHANCED 3 M x 1 000 000	CUMULATIVE PRODUCTION Dec. 31/84	REMAINING RESERVES	1984 PRODUCTION YEARLY TOTAL 3 M x1 000	PRODUCTION DAILY AVERAGE 3 M / DAY				
PRODUCING HORIZON												
AREA 1 - HEAVY												
ABERFELDY												
SPARKY SAND (UNIT)	53.558	5.30	5.50	10.80	2.839	2.946	5.785	4.868	0.917	187.634	412.4	
SPARKY SAND (S. ABERDY SPKY VOL UNIT)	23.605	4.80	1.90	6.70	1.133	0.448	1.581	1.414	0.167	30.421	71.2	
SPARKY SAND (NON-UNIT)	8.970	4.60	0.00	4.60	0.413	0.000	0.413	0.256	0.157	18.530	48.3	
BALDWINTON												
SPARKY SAND	1.609	5.00	0.00	5.00	0.080	0.000	0.080	0.045	0.035	6.572	16.2	
BIG GULLY												
MCLAREN SAND (VOLUNTARY UNIT NO. 1)	9.860	5.70	2.30	8.00	0.562	0.227	0.789	0.728	0.165	28.084	71.0	
WASECA SAND (VOLUNTARY UNIT NO. 1)	2.306	3.00	1.50	4.50	0.069	0.035	0.104					
MCLAREN SAND (NON-UNIT)	0.681	5.90	0.00	5.90	0.040	0.000	0.040					
WASECA SAND (NON-UNIT)	0.351	4.90	0.00	4.90	0.017	0.000	0.017					
BUZZARD												
LLOYDMINSTER SAND	4.738	5.00	0.00	5.00	0.237	0.000	0.237	0.075	0.162	23.298	66.7	
CELTIC												
G.P. SAND	21.286	5.40	0.00	5.40	1.149	0.000	1.149	0.094	2.814	55.120	254.9	
SPARKY SAND	16.001	3.10	0.00	3.10	0.496	0.000	0.496	0.074				
WASECA SAND	40.088	3.40	0.50	3.90	1.363	0.200	1.563	0.203				
MANNVILLE SANDS (COMMINGLED)								0.023				
DEE VALLEY												
WASECA SAND	19.538	4.80	0.00	4.80	0.938	0.000	0.938	0.245	0.693	35.192	107.4	
DEE VALLEY EAST												
SPARKY SAND	4.994	2.50	0.00	2.50	0.125	0.000	0.125	0.019	0.106	2.731	8.8	
WASECA SAND	5.217	4.00	0.00	4.00	0.209	0.000	0.209	0.041	0.168	5.916	23.1	
DULWICH												
SPARKY SAND	15.383	8.00	4.20	12.20	1.231	0.646	1.877	1.634	0.243	27.293	70.1	
DULWICH NORTH												
SPARKY SAND (N. DULWICH VOL UNIT)	1.151	5.50	14.40	19.90	0.063	0.166	0.229	0.205	0.024	3.967	11.9	
SPARKY SAND (NON-UNIT)	0.033	1.60	0.00	1.60	0.001	0.000	0.001	0.001	0.000	0.000	0.0	
EDAM												
WASECA SAND	6.255	1.70	0.00	1.70	0.106	0.000	0.106	0.028	0.078	4.337	12.4	
EDAM WEST												
G.P. SAND	6.572	5.20	0.00	5.20	0.342	0.000	0.342	0.016	1.090	9.112	29.3	
SPARKY SAND	11.150	7.10	0.00	7.10	0.792	0.000	0.792	0.042				
WASECA SAND	8.160	5.30	0.00	5.30	0.432	0.000	0.432	0.052				
MANNVILLE SANDS (COMMINGLED)								0.018				
EPPING												
G.P. SAND (S. EPPING UNIT)	4.310	3.00	1.40	4.40	0.129	0.060	0.189	2.420	0.400	54.442	142.0	
SPARKY SAND (S. EPPING UNIT)	23.924	5.00	6.00	11.00	1.196	1.435	2.631					
SPARKY SAND (SW EPPING VOL UNIT 1)	10.778	5.40	5.70	11.10	0.582	0.614	1.196					0.807
G.P. SAND (NON-UNIT)	12.459	3.50	0.00	3.50	0.436	0.000	0.436					0.369
SPARKY SAND (NON-UNIT)	33.316	5.30	0.00	5.30	1.766	0.000	1.766	1.500	0.266	47.867	145.0	
EYEHILL												
CUMMINGS SAND	7.469	1.00	13.40	14.40	0.075	1.001	1.076	0.102	0.974	22.819	62.6	
FOREST BANK												
SPARKY SAND	9.788	4.30	0.00	4.30	0.421	0.000	0.421	0.129	0.443	10.871	32.4	
WASECA SAND	7.823	4.40	0.00	4.40	0.344	0.000	0.344	0.136				
MANNVILLE SANDS (COMMINGLED)	0.617							0.057				
FREEMONT												
SPARKY SAND	2.671	5.50	0.00	5.50	0.147	0.000	0.147	0.075	0.072	10.008	26.4	
WASECA SAND	3.188	5.00	0.00	5.00	0.159	0.000	0.159	0.137	0.022	7.586	20.7	
FURNESS												
SPARKY SAND	9.265	5.20	0.00	5.20	0.482	0.000	0.482	0.359	0.123	17.303	50.2	
GOLDEN LAKE NORTH												
SPARKY SAND (GOLDEN LAKE VOL UNIT)	9.262	3.00	0.80	3.80	0.278	0.074	0.352	1.455	0.351	55.514	143.3	
WASECA SAND (GOLDEN LAKE VOL UNIT)	14.262	6.60	3.60	10.20	0.941	0.513	1.454					
SPARKY SAND (NON-UNIT)	5.215	3.40	0.00	3.40	0.177	0.000	0.177					0.094
WASECA SAND (NON-UNIT)	6.002	5.60	1.00	6.60	0.336	0.060	0.396					0.313

INITIAL OIL IN PLACE M3/M3	AREA HA X1 000	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	WATER SATURATION PER CENT	FORMATION VOLUME FACTOR	DENSITY OF OIL KG/M3	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL	PRODUCING HORIZON
AREA 1 - HEAVY											
0.299	4.047	4.42	35.0	13.0	1.017	968	535	CRETACEOUS	1956	ABERFELDY	SPARKY SAND (UNIT)
0.299	1.522	5.18	35.0	13.0	1.017	--	--	--	--		SPARKY SAND (S. ABFDY SPKY VOL UNIT)
0.299	0.535	5.60	35.0	13.0	1.017	--	--	--	--		SPARKY SAND (NON-UNIT)
0.157	0.227	4.50	25.0	30.0	1.111	970	599	CRETACEOUS	1969	BALDWINTON	SPARKY SAND
0.299	1.101	2.99	36.0	15.3	1.018	965	496	CRETACEOUS	1962	BIG GULLY	MCLAREN SAND (VOLUNTARY UNIT NO. 1)
0.299	0.308	2.50	36.0	15.3	1.018	965	479	CRETACEOUS	1962		WASECA SAND (VOLUNTARY UNIT NO. 1)
0.299	0.065	3.50	36.0	15.3	1.018	981	496	--	--		MCLAREN SAND (NON-UNIT)
0.299	0.016	7.32	36.0	15.3	1.018	972	479	--	--		WASECA SAND (NON-UNIT)
0.157	0.664	4.53	25.0	30.0	1.111	971	579	CRETACEOUS	1978	BUZZARD	LLOYDMINSTER SAND
0.234	1.441	6.30	35.0	31.0	1.030	969	477	CRETACEOUS	1968	CELTIC	G.P. SAND
0.264	0.994	6.10	35.0	24.0	1.008	975	463	CRETACEOUS	1968		SPARKY SAND
0.264	2.081	7.30	35.0	24.0	1.008	968	451	CRETACEOUS	1968		WASECA SAND
0.000	0.000	0.00	0.0	0.0	1.008	--	--	CRETACEOUS	--		MANVILLE SANDS (COMMINGLED)
0.290	1.341	5.03	35.0	16.0	1.015	976	460	CRETACEOUS	1967	DEE VALLEY	WASECA SAND
0.290	0.374	4.61	35.0	16.0	1.015	969	490	CRETACEOUS	1968	DEE VALLEY EAST	SPARKY SAND
0.290	0.479	3.76	35.0	16.0	1.015	971	464	CRETACEOUS	1970		WASECA SAND
0.259	1.910	3.11	34.0	15.0	1.116	962	556	CRETACEOUS	1948	DULWICH	SPARKY SAND
0.300	0.097	3.96	35.0	13.0	1.016	957	551	CRETACEOUS	1954	DULWICH NORTH	SPARKY SAND (N. DULWICH VOL UNIT)
0.300	0.004	2.74	35.0	13.0	1.016	--	--	--	--		SPARKY SAND (NON-UNIT)
0.157	0.651	6.10	25.0	30.0	1.111	988	431	CRETACEOUS	1972	EDAM	WASECA SAND
0.202	0.649	5.00	30.0	25.0	1.111	961	470	CRETACEOUS	1983	EDAM WEST	G.P. SAND
0.202	1.147	4.80	30.0	25.0	1.111	973	467	--	1982		SPARKY SAND
0.202	0.790	5.10	30.0	25.0	1.111	978	447	--	--		WASECA SAND
0.000	0.000	0.00	0.0	0.0	1.111	968	--	--	--		MANVILLE SANDS
0.281	1.473	1.04	35.0	18.0	1.020	962	583	CRETACEOUS	1951	EPPING	G.P. SAND (S. EPPING UNIT)
0.281	1.651	5.15	35.0	18.0	1.020	964	563	CRETACEOUS	1951		SPARKY SAND (S. EPPING UNIT)
0.281	0.923	4.15	35.0	18.0	1.020	--	--	--	--		SPARKY SAND (SW EPPING VOL UNIT 1)
0.281	1.230	3.60	35.0	18.0	1.020	962	--	--	--		G.P. SAND (NON-UNIT)
0.281	2.574	4.60	35.0	18.0	1.020	968	--	--	--		SPARKY SAND (NON-UNIT)
0.277	0.442	6.10	34.0	16.0	1.031	970	746	CRETACEOUS	1971	EYEHILL	CUMMINGS SAND
0.290	0.768	4.40	35.0	16.0	1.015	982	526	CRETACEOUS	1961	FOREST BANK	SPARKY SAND
0.290	0.831	3.25	35.0	16.0	1.015	979	507	CRETACEOUS	1963		WASECA SAND
0.276	0.065	3.44	35.0	20.0	1.015	--	--	--	--		MANVILLE SANDS (COMMINGLED)
0.266	0.292	3.44	35.0	20.0	1.053	963	636	CRETACEOUS	1976	FREEMONT	SPARKY SAND
0.266	0.324	3.70	35.0	20.0	1.053	958	620	CRETACEOUS	1976		WASECA SAND
0.284	0.567	5.75	34.0	15.0	1.017	967	566	CRETACEOUS	1970	FURNESS	SPARKY SAND
0.277	0.890	3.75	35.0	20.0	1.009	977	506	CRETACEOUS	1964	GOLDEN LAKE NORTH	SPARKY SAND (GOLDEN LAKE VOL UNIT)
0.290	1.198	4.11	35.0	16.0	1.015	964	481	CRETACEOUS	1964		WASECA SAND (GOLDEN LAKE VOL UNIT)
0.277	0.437	4.30	35.0	20.0	1.009	970	--	--	--		SPARKY SAND (NON-UNIT)
0.290	0.518	4.00	35.0	16.0	1.015	963	--	--	--		WASECA SAND (NON-UNIT)

POOL	PRODUCING HORIZON	INITIAL OIL	ESTIMATED RECOVERY			INITIAL RESERVES			CUMULATIVE PRODUCTION Dec. 31/84	REMAINING RESERVES	1984 PRODUCTION	DAILY AVERAGE
		IN PLACE	PRIMARY	ENHANCED	TOTAL	PRIMARY	ENHANCED	TOTAL			YEARLY	
		3				3					3	
		M x1 000 000	PER CENT			-----M x 1 000 000-----				M x1 000	M /DAY	
GOLDEN LAKE SOUTH												
	SPARKY SAND	27.079	3.50	5.40	8.90	0.948	1.462	2.410	0.584	1.826	63.832	130.5
	WASECA SAND	25.130	8.20	0.70	8.90	2.061	0.176	2.237	1.418	0.819	108.548	303.6
GULLY LAKE												
	WASECA SAND (VOLUNTARY UNIT NO. 1)	10.986	4.90	3.70	8.60	0.538	0.406	0.944	0.650	0.294	41.615	112.8
	WASECA SAND (NON-UNIT)	14.149	7.70	0.00	7.70	1.089	0.000	1.089	0.620	0.469	66.564	180.6
LANDROSE												
	MCLAREN SAND	2.850	2.90	0.00	2.90	0.083	0.000	0.083	0.081	0.002	0.033	0.0
	WASECA SAND	2.140	5.50	0.00	5.50	0.118	0.000	0.118	0.110	0.008	1.003	4.0
LASHBURN												
	WASECA SAND (LASH. WASECA VOL UNIT)	18.059	3.10	3.00	6.10	0.560	0.542	1.102	0.727	0.375	37.038	151.1
	WASECA SAND (NON-UNIT)	4.597	3.70	0.00	3.70	0.170	0.000	0.170	0.127	0.043	7.538	24.5
LASHBURN SOUTH												
	SPARKY SAND	1.387	2.60	0.00	2.60	0.036	0.000	0.036	0.022	0.014	2.593	8.0
	WASECA SAND	7.978	3.10	0.00	3.10	0.247	0.000	0.247	0.131	0.116	16.720	51.4
LASHBURN WEST												
	SPARKY SAND	7.920	1.60	0.00	1.60	0.127	0.000	0.127	0.031	0.096	5.832	16.3
LLOYDMINSTER												
	SPARKY SAND	3.601	5.20	0.00	5.20	0.187	0.000	0.187	0.131	0.056	11.650	34.8
LONE ROCK												
	SPARKY SAND	13.966	7.70	1.50	9.20	1.075	0.209	1.284	1.200	0.084	12.396	32.4
LOW LAKE												
	WASECA SAND	1.288	4.80	0.00	4.80	0.062	0.000	0.062	0.052	0.010	1.639	7.0
MACKLIN												
	SPARKY SAND	9.197	5.80	0.00	5.80	0.533	0.000	0.533	0.297	0.236	29.420	71.5
MAIDSTONE												
	MCLAREN SAND	5.656	8.90	0.00	8.90	0.503	0.000	0.503	0.100	0.403	29.965	76.1
	WASECA SAND	1.429	5.20	0.00	5.20	0.074	0.000	0.074	0.017	0.057	7.757	17.4
MARSDEN												
	SPARKY SAND	1.373	9.20	0.00	9.20	0.126	0.000	0.126	0.097	0.029	6.625	22.9
MARSDEN SOUTH												
	SPARKY SAND	7.998	5.00	0.00	5.00	0.400	0.000	0.400	0.250	0.150	67.146	151.4
NEILBURG												
	MCLAREN SAND	5.676	14.00	0.00	14.00	0.795	0.000	0.795	0.209	0.586	76.904	208.8
NORTHMINSTER												
	SPARKY SAND (NORTH. SPARKY VOL UNIT)	10.939	3.50	4.00	7.50	0.383	0.438	0.821	0.731	0.090	19.477	47.7
	SPARKY SAND (NON-UNIT)	2.069	3.00	1.00	4.00	0.062	0.021	0.083	0.056	0.027	5.487	15.6
NORTHMINSTER NORTH												
	G.P. SAND	0.874	1.60	0.00	1.60	0.014	0.000	0.014	0.011	0.003	0.863	1.5
	SPARKY SAND	4.205	4.20	0.00	4.20	0.177	0.000	0.177	0.057	0.120	8.101	23.2
PIKES PEAK												
	G.P. SAND	2.531	10.50	0.00	10.50	0.266	0.000	0.266	0.160	0.106	16.439	48.2
	SPARKY SAND	0.968	2.00	0.00	2.00	0.019	0.000	0.019	0.008	0.011	1.206	4.7
	WASECA SAND	12.335	3.00	10.00	13.00	0.370	1.233	1.603	0.600	1.003	266.665	773.6
RUSH LAKE												
	SPARKY SAND	2.237	3.40	0.00	3.40	0.076	0.000	0.076	0.036	0.040	5.658	21.5
	WASECA SAND	1.363	4.30	0.00	4.30	0.059	0.000	0.059	0.020	0.039	6.068	11.9
SENAC												
	LLOYDMINSTER SAND	13.671	9.00	0.00	9.00	1.230	0.000	1.230	0.280	0.950	110.763	254.7
SILVERDALE												
	SPARKY SAND	17.878	6.60	0.50	7.10	1.180	0.089	1.269	1.201	0.068	19.349	50.2
STANDARD HILL												
	WASECA SAND	19.552	9.70	0.00	9.70	1.897	0.000	1.897	0.801	1.096	97.337	281.9
TANGLEFLAGS												
	LLOYDMINSTER SAND (VOL UNIT NO.2)	3.463	5.50	2.50	8.00	0.190	0.087	0.277	0.203	0.074	13.693	38.8
	G.P. (VOL UNIT NO. 3)	4.857	4.20	0.00	4.20	0.204	0.000	0.204	0.094	0.110	13.729	30.5
	LLOYDMINSTER SD (VOL UNIT NO. 3)	5.688	5.00	0.00	5.00	0.284	0.000	0.284	0.150	0.134	18.512	48.5

INITIAL OIL IN PLACE M3/M3	AREA HA X1 000	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	WATER SATURATION PER CENT	FORMATION VOLUME FACTOR	DENSITY OF OIL KG/M3	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL PRODUCING HORIZON
GOLDEN LAKE SOUTH										
0.284	1.469	6.50	35.0	18.0	1.012	978	490	CRETACEOUS	1964	SPARKY SAND
0.290	2.236	3.88	35.0	16.0	1.015	966	473	CRETACEOUS	1964	WASECA SAND
GULLY LAKE										
0.290	0.874	4.33	35.7	16.0	1.033	963	472	CRETACEOUS	1949	WASECA SAND (VOLUNTARY UNIT NO. 1)
0.290	1.037	4.70	35.7	16.0	1.033	969	--	--	--	WASECA SAND (NON-UNIT)
LANDROSE										
0.228	0.202	6.19	30.0	20.0	1.053	981	513	CRETACEOUS	1950	MCLAREN SAND
0.290	0.162	4.55	36.0	18.0	1.017	983	521	CRETACEOUS	1950	WASECA SAND
LASHBURN										
0.230	1.263	6.22	30.0	21.0	1.031	962	518	CRETACEOUS	1960	WASECA SAND (LASH. WASECA VOL UNIT)
0.292	0.291	5.40	35.0	15.0	1.017	963	--	--	--	WASECA SAND (NON-UNIT)
LASHBURN SOUTH										
0.275	0.146	3.45	35.0	20.0	1.017	983	534	CRETACEOUS	1967	SPARKY SAND
0.292	0.567	4.81	35.0	15.0	1.017	979	524	CRETACEOUS	1971	WASECA SAND
LASHBURN WEST										
0.157	0.838	6.00	25.0	30.0	1.111	991	537	CRETACEOUS	1979	SPARKY SAND
LLOYDMINSTER										
0.299	0.194	6.20	35.0	13.0	1.017	965	556	CRETACEOUS	1952	SPARKY SAND
LONE ROCK										
0.266	0.955	5.49	33.0	15.0	1.053	960	571	CRETACEOUS	1947	SPARKY SAND
LOW LAKE										
0.248	0.113	4.60	36.0	30.0	1.017	971	509	CRETACEOUS	1950	WASECA SAND
MACKLIN										
0.261	1.259	2.80	35.0	23.0	1.033	947	712	CRETACEOUS	1976	SPARKY SAND
MAIDSTONE										
0.157	1.330	2.70	25.0	30.0	1.111	963	500	CRETACEOUS	1978	MCLAREN SAND
0.157	0.275	3.30	25.0	30.0	1.111	973	503	CRETACEOUS	1981	WASECA SAND
MARSDEN										
0.266	0.113	4.57	35.0	20.0	1.053	982	606	CRETACEOUS	1949	SPARKY SAND
MARSDEN SOUTH										
0.218	0.618	5.93	30.0	25.0	1.031	946	625	CRETACEOUS	1979	SPARKY SAND
NEILBURG										
0.157	1.102	3.27	25.0	30.0	1.111	964	570	CRETACEOUS	1978	MCLAREN SAND
NORTHMINSTER										
0.284	0.987	3.90	34.0	15.0	1.017	976	541	CRETACEOUS	1959	SPARKY SAND (NORTH. SPARKY VOL UNIT)
0.284	0.130	5.60	34.0	15.0	1.017	967	--	--	--	SPARKY SAND (NON-UNIT)
NORTHMINSTER NORTH										
0.157	0.113	4.91	25.0	30.0	1.111	984	543	CRETACEOUS	1961	G.P. SAND
0.157	0.568	4.70	25.0	30.0	1.111	970	524	CRETACEOUS	1961	SPARKY SAND
PIXES PEAK										
0.233	0.259	4.20	35.0	30.0	1.053	970	530	CRETACEOUS	1970	G.P. SAND
0.233	0.130	3.20	35.0	30.0	1.053	984	515	CRETACEOUS	1973	SPARKY SAND
0.275	0.534	8.40	33.0	15.0	1.020	978	497	CRETACEOUS	1970	WASECA SAND
RUSH LAKE										
0.157	0.211	6.73	25.0	30.0	1.111	978	478	CRETACEOUS	1971	SPARKY SAND
0.157	0.178	4.86	25.0	30.0	1.111	977	450	CRETACEOUS	1971	WASECA SAND
SENLAG										
0.202	1.361	4.96	30.0	25.0	1.111	968	787	CRETACEOUS	1980	LLOYDMINSTER SAND
SILVERDALE										
0.258	1.831	3.78	34.0	20.0	1.053	965	564	CRETACEOUS	1968	SPARKY SAND
STANDARD HILL										
0.281	1.909	3.64	34.0	16.0	1.015	968	472	CRETACEOUS	1963	WASECA SAND
TANGLEFLAGS										
0.232	0.421	3.54	30.0	21.0	1.020	959	532	CRETACEOUS	1965	LLOYDMINSTER SAND (VOL UNIT NO.2)
0.268	0.567	3.20	33.3	18.0	1.020	969	490	CRETACEOUS	1971	G.P. (VOL UNIT NO. 3)
0.205	0.880	3.15	30.6	31.6	1.020	960	532	--	--	LLOYDMINSTER SD (VOL UNIT NO. 3)

POOL	INITIAL OIL ESTIMATED RECOVERY IN PLACE PRIMARY ENHANCED TOTAL				INITIAL RESERVES PRIMARY ENHANCED TOTAL				CUMULATIVE PRODUCTION REMAINING Dec. 31/84 RESERVES		1984 PRODUCTION YEARLY DAILY TOTAL AVERAGE	
	PRODUCING HORIZON	M x 1 000 000	PER CENT		M x 1 000 000						M x 1 000	M / DAY
	SPARKY SAND (VOL UNIT NO. 3)	4.857	1.10	0.00	1.10	0.053	0.000	0.053	0.020	0.033	3.099	8.0
	G.P. SAND (NON-UNIT)	44.278	6.60	0.00	6.60	2.922	0.000	2.922	1.117		101.990	287.6
	LLOYDMINSTER SAND (NON-UNIT)	43.215	4.30	0.00	4.30	1.858	0.000	1.858	0.690		76.510	216.1
	SPARKY SAND (NON-UNIT)	12.721	6.40	0.00	6.40	0.814	0.000	0.814	0.176		29.089	82.5
	MANNVILLE SD (COMMINGLED) (NON-UNIT)								0.237		15.618	39.1
	TANGLEFLAGS EAST											
	MCLAREN SAND	1.495	6.10	0.00	6.10	0.091	0.000	0.091	0.046	0.045	6.716	18.6
	TANGLEFLAGS NORTH											
	CUMMINGS SAND	4.526	2.90	0.00	2.90	0.131	0.000	0.131	0.056	0.075	8.120	19.6
	G.P. SAND	2.195	0.80	0.00	0.80	0.018	0.000	0.018	0.008	0.010	1.379	2.9
	LLOYDMINSTER SAND	12.896	3.60	0.00	3.60	0.464	0.000	0.464	0.162	0.302	34.150	109.2
	TANGLEFLAGS WEST											
	G.P. SAND	1.149	1.00	0.00	1.00	0.011	0.000	0.011	0.008	0.003	0.698	2.4
	LLOYDMINSTER SAND	2.856	4.00	0.00	4.00	0.114	0.000	0.114	0.057	0.057	9.413	23.9
	SPARKY SAND	1.776	4.70	0.00	4.70	0.083	0.000	0.083	0.038	0.045	6.696	17.3
	WESTHAZEL											
	G.P. SAND	4.339	3.60	0.00	3.60	0.156	0.000	0.156	0.034	0.122	12.844	58.3
	SPARKY SAND	7.286	3.00	0.00	3.00	0.219	0.000	0.219	0.077	0.142	16.537	58.7
	WINTER											
	CUMMINGS SAND	4.176	1.10	0.00	1.10	0.046	0.000	0.046	0.019	0.027	3.592	7.7
	MISCELLANEOUS											
	BASAL MANNVILLE SAND	0.028	2.00	0.00	2.00	0.001	0.000	0.001	0.001	0.000	0.000	0.0
	COLONY SAND	5.801	1.90	0.00	1.90	0.110	0.000	0.110	0.026	0.084	10.061	28.6
	CUMMINGS SAND	9.087	1.00	0.00	1.00	0.091	0.000	0.091	0.044	0.047	4.639	13.0
	DINA SAND	1.164	0.60	0.00	0.60	0.007	0.000	0.007	0.003	0.004	1.031	2.0
	G.P. SAND	14.997	3.70	0.00	3.70	0.555	0.000	0.555	0.265	0.290	30.843	83.4
	LLOYDMINSTER SAND	9.422	2.30	2.60	4.90	0.217	0.245	0.462	0.183	0.279	46.942	132.2
	MANNVILLE SANDS	0.287	2.80	0.00	2.80	0.008	0.000	0.008	0.003	0.005	0.815	2.8
	MANNVILLE SANDS (COMMINGLED)	13.739	2.50	0.00	2.50	0.343	0.000	0.343	0.165	0.178	19.246	51.6
	MCLAREN (T'FLAGS VOL UNIT NO. 3)	0.212	9.40	0.00	9.40	0.020	0.000	0.020	0.006	0.014	1.963	1.1
	MCLAREN SAND	13.595	3.00	0.00	3.00	0.408	0.000	0.408	0.183	0.225	22.755	54.8
	REX SAND	2.847	1.40	0.00	1.40	0.040	0.000	0.040	0.024	0.016	2.138	4.7
	SPARKY SAND	43.932	5.10	0.00	5.10	2.241	0.000	2.241	0.737	1.504	146.270	442.1
	WASECA SAND	17.489	3.40	0.00	3.40	0.595	0.000	0.595	0.213	0.382	33.441	122.8
	TOTAL AREA I HEAVY	977.309				47.865	13.333	61.198	33.930	27.268	2779.985	7855.0
	AREA II - HEAVY											
	ALSASK											
	BASAL MANNVILLE SAND	0.162	9.20	0.00	9.20	0.015	0.000	0.015	0.009	0.006	1.221	3.8
	BUFFALO COULEE											
	BAKKEN SAND	7.106	4.00	2.00	6.00	0.284	0.142	0.426	0.234	0.192	17.739	58.4
	BUFFALO COULEE NORTH											
	BAKKEN SAND	3.724	2.50	0.00	2.50	0.093	0.000	0.093	0.055	0.038	7.566	20.1
	CACTUS LAKE											
	BASAL MANNVILLE-BAKKEN SAND	33.747	7.60	0.00	7.60	2.565	0.000	2.565	0.879	1.686	219.808	587.0
	COLEVILLE											
	BAKKEN SAND	53.780	3.90	14.00	17.90	2.097	7.529	9.626	6.389	3.237	206.186	529.1
	MANNVILLE SANDS	1.517	5.00	0.00	5.00	0.076	0.000	0.076	0.040	0.036	6.001	26.7
	COLEVILLE SOUTH											
	BAKKEN SANDS	5.097	5.00	0.00	5.00	0.255	0.000	0.255	0.027	0.228	22.514	79.4
	MANNVILLE	1.422	4.00	0.00	4.00	0.057	0.000	0.057	0.004	0.053	2.383	8.5
	COSINE LAKE											
	LLOYDMINSTER SAND	7.487	0.60	0.00	0.60	0.045	0.000	0.045	0.028	0.017	7.873	17.7
	COURT											
	BAKKEN SAND	10.176	6.20	0.00	6.20	0.631	0.000	0.631	0.085	0.546	61.702	171.0

INITIAL OIL IN PLACE M3/M3	AREA HA X1 000	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	WATER SATURATION PER CENT	FORMATION VOLUME FACTOR	DENSITY OF OIL KG/M3	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL	PRODUCING HORIZON
0.238	0.627	3.25	35.0	30.0	1.028	970	511	CRETACEOUS	1969	SPARKY SAND (VOL UNIT NO. 3)	
0.268	3.075	5.38	35.0	22.0	1.020	970	492	--	--	G.P. SAND (NON-UNIT)	
0.257	4.419	3.80	35.0	25.0	1.020	962	--	--	--	LLOYDMINSTER SAND (NON-UNIT)	
0.238	1.525	3.50	35.0	30.0	1.028	969	511	--	--	SPARKY SAND (NON-UNIT)	
0.000	0.000	0.00	0.0	0.0	1.020	964	--	--	--	MANNVILLE SD (COMMINGLED) (NON-UNIT)	
TANGLEFLAGS EAST											
0.157	0.226	4.20	25.0	30.0	1.111	973	359	CRETACEOUS	1978	MCLAREN SAND	
TANGLEFLAGS NORTH											
0.240	0.227	8.30	35.0	30.0	1.020	977	518	CRETACEOUS	1976	CUMMINGS SAND	
0.233	0.178	5.30	35.0	30.0	1.053	978	450	CRETACEOUS	1977	G.P. SAND	
0.240	0.826	6.50	35.0	30.0	1.020	970	515	CRETACEOUS	1977	LLOYDMINSTER SAND	
TANGLEFLAGS WEST											
0.268	0.081	5.30	35.0	22.0	1.020	979	516	CRETACEOUS	1972	G.P. SAND	
0.257	0.292	3.80	35.0	25.0	1.020	967	563	CRETACEOUS	1972	LLOYDMINSTER SAND	
0.238	0.162	4.60	35.0	30.0	1.028	975	498	CRETACEOUS	1972	SPARKY SAND	
WESTHAZEL											
0.233	0.259	7.20	35.0	30.0	1.053	977	485	CRETACEOUS	1971	G.P. SAND	
0.264	0.502	5.50	35.0	24.0	1.008	967	455	CRETACEOUS	1969	SPARKY SAND	
WINTER											
0.157	0.227	11.68	25.0	30.0	1.111	980	660	CRETACEOUS	1980	CUMMINGS SAND	
MISCELLANEOUS											
0.233	0.008	1.52	35.0	30.0	1.053	--	--	CRETACEOUS	--	BASAL MANNVILLE SAND	
0.233	0.470	5.30	35.0	30.0	1.052	--	--	CRETACEOUS	--	COLONY SAND	
0.233	0.559	6.98	35.0	30.0	1.052	--	--	CRETACEOUS	--	CUMMINGS SAND	
0.233	0.049	10.20	35.0	30.0	1.052	--	--	CRETACEOUS	--	DINA SAND	
0.233	1.215	5.30	35.0	30.0	1.052	--	--	CRETACEOUS	--	G.P. SAND	
0.233	0.778	5.20	35.0	30.0	1.052	--	--	CRETACEOUS	--	LLOYDMINSTER SAND	
0.157	0.032	5.70	25.0	30.0	1.111	--	--	CRETACEOUS	--	MANNVILLE SANDS	
0.233	0.779	7.58	15.0	30.0	1.053	--	--	CRETACEOUS	--	MANNVILLE SANDS (COMMINGLED)	
0.233	0.032	2.85	35.0	30.0	1.053	--	--	CRETACEOUS	--	MCLAREN (T'FLAGS VOL UNIT NO. 3)	
0.233	1.328	4.40	35.0	30.0	1.053	--	--	CRETACEOUS	--	MCLAREN SAND	
0.233	0.211	5.80	35.0	30.0	1.053	--	--	CRETACEOUS	--	REX SAND	
0.233	4.196	4.50	35.0	30.0	1.053	--	--	CRETACEOUS	--	SPARKY SAND	
0.233	1.296	5.80	35.0	30.0	1.053	--	--	CRETACEOUS	--	WASECA SAND	
TOTAL AREA I HEAVY											
AREA II - HEAVY											
ALSASK											
0.091	0.045	3.96	26.9	55.0	1.333	953	818	CRETACEOUS	1968	BASAL MANNVILLE SAND	
BUFFALO COULEE											
0.190	0.350	6.80	26.6	25.0	1.050	978	823	MISSISSIPPIAN	1952	BAKKEN SAND	
BUFFALO COULEE NORTH											
0.206	0.275	6.58	29.5	25.0	1.075	981	814	MISSISSIPPIAN	1952	BAKKEN SAND	
CACTUS LAKE											
0.209	1.975	8.16	29.4	25.0	1.053	964	851	MISSISSIPPIAN	1974	BASAL MANNVILLE-BAKKEN SAND	
COLEVILLE											
0.154	2.743	12.71	24.1	31.0	1.078	982	823	MISSISSIPPIAN	1951	BAKKEN SAND	
0.169	0.227	3.96	25.0	25.0	1.111	976	765	CRETACEOUS	1952	MANNVILLE SANDS	
COLEVILLE SOUTH											
0.202	0.308	8.18	29.0	25.0	1.075	972	818	MISSISSIPPIAN	1983	BAKKEN SANDS	
0.169	0.081	10.40	25.0	25.0	1.111	974	757	CRETACEOUS	1983	MANNVILLE	
COSINE LAKE											
0.183	0.871	4.70	29.0	30.0	1.110	965	776	CRETACEOUS	1972	LLOYDMINSTER SAND	
COURT											
0.226	0.534	8.44	31.7	25.0	1.053	953	863	MISSISSIPPIAN	1982	BAKKEN SAND	

POOL	INITIAL OIL IN PLACE 3 M x 1 000 000	ESTIMATED RECOVERY PRIMARY ENHANCED TOTAL PER CENT	INITIAL RESERVES PRIMARY ENHANCED TOTAL 3 M x 1 000 000	CUMULATIVE PRODUCTION REMAINING Dec. 31/84 RESERVES	1984 PRODUCTION YEARLY TOTAL 3 M x 1 000	DAILY AVERAGE 3 M /DAY					
PRODUCING HORIZON											
BRUID											
MANNVILLE SANDS	2.365	4.00	4.00	0.095	0.000	0.095	0.013	0.082	3.291	12.2	
FUSILIER											
BAKKEN SAND	3.239	10.70	0.00	10.70	0.347	0.000	0.347	0.148	0.199	17.994	48.4
HEARTS HILL											
BAKKEN SAND	1.739	5.00	0.00	5.00	0.087	0.000	0.087	0.009	0.078	7.349	32.5
HOOSIER											
BAKKEN SAND (VOLUNTARY UNIT NO. 1)	3.128	4.00	4.20	8.20	0.125	0.131	0.256	0.128	0.128	15.458	39.7
BAKKEN SAND (NON-UNIT)	5.178	5.20	0.00	5.20	0.269	0.000	0.269	0.134	0.135	18.586	47.2
LOVERNA											
DETRITAL	2.766	3.40	0.00	3.40	0.094	0.000	0.094	0.075	0.019	3.452	9.7
LUSELAND											
BAKKEN SAND	14.504	3.50	0.00	3.50	0.508	0.000	0.508	0.074	0.434	32.648	86.9
NORTH HOOSIER											
BAKKEN SAND (VOLUNTARY UNIT)	8.617	2.30	11.50	13.80	0.198	0.991	1.189	0.812	0.377	37.449	100.9
BAKKEN SAND (NON-UNIT)	4.284	5.50	0.00	5.50	0.236	0.000	0.236	0.146	0.090	14.195	33.5
NORTH HOOSIER											
BASAL MANNVILLE SAND (VOL UNIT)	4.161	6.00	12.00	18.00	0.250	0.499	0.749	0.545	0.204	24.205	68.3
PLOVER LAKE											
BAKKEN SAND	11.491	5.00	0.00	5.00	0.575	0.000	0.575	0.124	0.451	34.288	100.6
MISCELLANEOUS											
BAKKEN SAND	9.163	3.30	0.00	3.30	0.302	0.000	0.302	0.087	0.215	23.100	67.8
BASAL MANNVILLE SAND	2.186	1.00	0.00	1.00	0.022	0.000	0.022	0.011	0.011	2.422	7.9
BIRDBEAR	0.016	3.00	0.00	3.00	0.000	0.000	0.000	0.000	0.000	0.094	3.0
DETRITAL	2.563	1.20	0.00	1.20	0.031	0.000	0.031	0.016	0.015	2.471	6.3
LLOYDMINISTER SAND	0.406	2.50	0.00	2.50	0.010	0.000	0.010	0.004	0.006	0.751	2.2
MANNVILLE SAND	6.457	2.80	0.00	2.80	0.181	0.000	0.181	0.053	0.128	10.719	30.0
TOTAL AREA II HEAVY	206.481				9.448	9.292	18.740	10.129	8.611	801.466	2198.7
AREA II - LIGHT											
AVON HILL											
VIKING	6.207	9.00	0.00	9.00	0.559	0.000	0.559	0.348	0.211	29.001	97.0
DODSLAND											
VIKING SAND (EAGLE LAKE UNIT)	12.724	15.30	8.00	23.30	1.947	1.018	2.965	1.784	1.181	81.669	311.1
VIKING SAND (GLENEATH UNIT)	9.546	15.40	12.40	27.80	1.470	1.184	2.654	1.705	0.949	68.505	216.0
VIKING SAND (NON-UNIT)	72.130	8.70	0.00	8.70	6.275	0.000	6.275	2.514	3.761	503.097	1354.2
EUREKA											
VIKING (NORTH EUREKA UNIT)	6.709	10.00	6.70	16.70	0.671	0.450	1.121	1.042	0.079	16.065	39.0
VIKING (SOUTH EUREKA UNIT)	6.811	9.50	9.50	19.00	0.647	0.647	1.294	1.068	0.226	22.922	69.8
VIKING (NON-UNIT)	6.000	4.00	0.00	4.00	0.246	0.000	0.246	0.070	0.170	24.418	63.8
KERROBERT											
VIKING	3.157	13.00	0.00	13.00	0.410	0.000	0.410	0.024	0.386	22.500	128.7
LUCKY HILLS											
VIKING (VOLUNTARY UNIT)	1.573	4.40	0.00	4.40	0.069	0.000	0.069	0.063	0.006	2.032	7.2
VIKING (NON-UNIT)	1.616	4.90	0.00	4.90	0.079	0.000	0.079	0.075	0.004	2.539	7.6
PLATO											
VIKING (VOL UNIT NO. 1)	4.239	4.50	1.90	6.40	0.191	0.081	0.272	0.263	0.009	1.777	3.7
VIKING (NON-UNIT)	0.316	8.20	0.00	8.20	0.026	0.000	0.026	0.013	0.013	2.270	8.5
PLATO NORTH											
VIKING	4.678	7.70	0.00	7.70	0.360	0.000	0.360	0.068	0.292	38.215	96.9
SMILEY-DEMAR											
VIKING	23.134	15.80	6.60	22.40	3.655	1.527	5.182	4.021	1.161	85.780	237.9
WHITESIDE											
VIKING SAND (UNIT)	2.561	10.30	0.00	10.30	0.264	0.000	0.264	0.227	0.037	13.973	33.0
VIKING SAND (NON-UNIT)	0.747	5.00	0.00	5.00	0.037	0.000	0.037	0.015	0.022	7.032	18.6

INITIAL OIL IN PLACE M3/M3	AREA HA X1 000	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	WATER SATURATION PER CENT	FORMATION VOLUME FACTOR	DENSITY OF OIL KG/M3	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL	PRODUCING HORIZON
DRUID											
0.163	0.210	6.90	25.9	30.0	1.111	969	729	CRETACEOUS	1969	MANHVILLE SANDS	
FUSILIER											
0.186	0.414	4.21	25.4	22.0	1.066	962	799	MISSISSIPPIAN	1955	BAKKEN SAND	
HEARTS HILL											
0.202	0.146	5.89	28.4	25.0	1.053			MISSISSIPPIAN	1983	BAKKEN SAND	
HOOSIER											
0.233	0.228	5.88	31.5	22.0	1.053	975	865	MISSISSIPPIAN	1973	BAKKEN SAND (VOLUNTARY UNIT NO. 1)	
0.185	0.389	7.19	25.3	22.0	1.066	976	--	--	--	BAKKEN SAND (NON-UNIT)	
LOVERNA											
0.163	0.162	10.50	28.9	25.0	1.333	957	853	CRET-JURASSIC	1952	DETRITAL	
LUSELAND											
0.218	0.599	11.11	30.6	25.0	1.053	983	739	MISSISSIPPIAN	1979	BAKKEN SAND	
NORTH HOOSIER											
0.223	0.558	6.92	30.5	22.0	1.066	958	878	MISSISSIPPIAN	1965	BAKKEN SAND (VOLUNTARY UNIT)	
0.223	0.275	6.98	30.5	22.0	1.066	--	--	--	--	BAKKEN SAND (NON-UNIT)	
NORTH HOOSIER											
0.195	0.287	7.44	28.0	27.0	1.049	970	838	CRETACEOUS	1964	BASAL MANHVILLE SAND (VOL UNIT)	
PLOVER LAKE											
0.224	0.582	8.80	31.5	25.0	1.053	987	817	MISSISSIPPIAN	1974	BAKKEN SAND	
MISCELLANEOUS											
0.189	0.680	7.12	26.9	25.0	1.066	--	--	MISSISSIPPIAN	--	BAKKEN SAND	
0.199	0.178	6.18	27.9	25.0	1.053	--	--	CRETACEOUS	--	BASAL MANHVILLE SAND	
0.029	0.016	3.51	6.6	42.0	1.333	975	--	DEVONIAN	--	BIRDBEAR	
0.150	0.178	9.60	28.6	30.0	1.335	--	--	CRET.-JURASSIC	--	DETRITAL	
0.166	0.049	4.98	25.0	30.0	1.053	--	--	CRETACEOUS	--	LLOYDMINISTER SAND	
0.172	0.486	7.72	25.0	26.0	1.075	--	--	CRETACEOUS	--	MANHVILLE SAND	
TOTAL AREA II HEAVY											
AREA II - LIGHT											
AVON HILL											
0.115	2.218	2.44	23.0	45.0	1.103	844	725	CRETACEOUS	1959	VIKING	
DODSLAND											
0.112	3.772	3.02	22.4	45.0	1.103	840	671	CRETACEOUS	1956	VIKING SAND (EAGLE LAKE UNIT)	
0.108	3.011	2.93	21.7	45.0	1.103	--	--	--	--	VIKING SAND (GLENEATH UNIT)	
0.112	26.466	2.44	22.4	45.0	1.103	842	--	--	--	VIKING SAND (NON-UNIT)	
EUREKA											
0.120	1.683	3.32	23.0	42.0	1.111	853	723	CRETACEOUS	1954	VIKING (NORTH EUREKA UNIT)	
0.121	1.522	3.69	23.0	42.0	1.100	--	--	--	--	VIKING (SOUTH EUREKA UNIT)	
0.121	1.198	4.13	23.0	42.0	1.100	849	--	--	--	VIKING (NON-UNIT)	
KERROBERT											
0.115	1.101	2.50	23.0	45.0	1.103	842	714	CRETACEOUS	1981	VIKING	
LUCKY HILLS											
0.114	0.453	3.05	23.0	45.0	1.111	843	716	CRETACEOUS	1959	VIKING (VOLUNTARY UNIT)	
0.114	0.518	2.74	23.0	45.0	1.111	--	--	--	--	VIKING (NON-UNIT)	
PLATO											
0.128	1.781	1.86	22.0	38.0	1.066	853	644	CRETACEOUS	1968	VIKING (VOL UNIT NO. 1)	
0.128	0.291	0.85	22.0	38.0	1.066	856	--	--	--	VIKING (NON-UNIT)	
PLATO NORTH											
0.135	1.278	2.72	23.0	35.0	1.111	865	705	CRETACEOUS	1978	VIKING	
SMILEY-DEWAR											
0.121	4.322	4.42	24.0	45.0	1.090	875	701	CRETACEOUS	1953	VIKING	
WHITESIDE											
0.120	1.165	1.83	24.0	45.0	1.099	870	751	CRETACEOUS	1953	VIKING SAND (UNIT)	
0.120	0.340	1.83	24.0	45.0	1.099	870	--	--	--	VIKING SAND (NON-UNIT)	

POOL	PRODUCING HORIZON	INITIAL OIL ESTIMATED RECOVERY				INITIAL RESERVES			CUMULATIVE PRODUCTION Dec. 31/84	REMAINING RESERVES	1984 PRODUCTION	
		IN PLACE	PRIMARY	ENHANCED	TOTAL	PRIMARY	ENHANCED	TOTAL			YEARLY TOTAL	DAILY AVERAGE
		3				3						
		M x1 000 000	PER CENT		-----M x 1 000 000-----					M x1 000	M /DAY	
MISCELLANEOUS												
VIKING SAND		13.768	2.90	0.00	2.90	0.399	0.000	0.399	0.070	0.329	28.414	138.2
VIKING CHERT		0.158	1.20	0.00	1.20	0.002	0.000	0.002	0.002	0.000	0.000	0.0
TOTAL AREA II LIGHT		176.074				17.301	4.907	22.208	13.372	8.836	950.208	2831.2
AREA III - MEDIUM												
ANTELOPE LAKE												
UPPER SHAUNAVON (VOL UNIT)		0.992	5.00	5.40	10.40	0.050	0.054	0.104	0.063	0.041	3.841	10.1
UPPER SHAUNAVON (NON-UNIT)		0.029	5.20	0.00	5.20	0.002	0.000	0.002	0.002	0.000	0.125	0.4
ANTELOPE LAKE EAST												
ROSERAY SAND		0.186	3.80	0.00	3.80	0.007	0.000	0.007	0.006	0.001	0.607	1.0
BATTLE CREEK												
MADISON		0.428	4.00	0.00	4.00	0.017	0.000	0.017	0.017	0.000	0.610	1.4
BATTLE CREEK												
UPPER SHAUNAVON		0.497	7.70	0.00	7.70	0.038	0.000	0.038	0.028	0.010	1.371	3.5
BATTRUM NORTH												
ROSERAY SAND		2.245	8.80	0.00	8.80	0.198	0.000	0.198	0.049	0.149	13.225	44.4
BATTRUM												
ROSERAY SAND (UNIT NO. 1)		29.044	10.00	10.30	20.30	2.904	2.992	5.896	4.543	1.353	128.723	352.9
ROSERAY SAND (UNIT NO. 2)		5.990	6.60	22.40	29.00	0.395	1.342	1.737	1.157	0.580	59.506	125.4
ROSERAY SAND (UNIT NO. 3)		7.254	8.00	21.00	29.00	0.580	1.523	2.103	1.186	0.917	49.958	129.6
ROSERAY SAND (UNIT NO. 4)		3.431	8.30	26.80	35.10	0.285	0.920	1.205	0.826	0.379	46.820	126.4
ROSERAY SAND (NON-UNIT)		1.241	9.00	0.00	9.00	0.112	0.000	0.112	0.025	0.087	7.892	18.9
BENCH												
UPPER SHAUNAVON		5.251	7.30	0.00	7.30	0.383	0.000	0.383	0.211	0.172	21.682	55.3
BEVERLEY												
CANTUAR SAND		7.011	6.00	2.00	8.00	0.421	0.140	0.561	0.371	0.190	24.489	59.7
BEVERLEY NORTH												
CANTUAR SAND		7.523	4.00	0.00	4.00	0.301	0.000	0.301	0.158	0.143	17.225	39.1
BEVERLEY												
UPPER ROSERAY SAND (BEV. UNIT NO. 1)		4.036	15.00	27.50	42.50	0.605	1.110	1.715	1.526	0.189	23.266	60.3
UPPER ROSERAY SAND (NON-UNIT)		0.567	15.50	0.00	15.50	0.088	0.000	0.088	0.048	0.040	6.347	13.5
BONE CREEK												
UPPER SHAUNAVON (UNIT)		12.699	5.00	15.00	20.00	0.635	1.905	2.540	2.247	0.293	38.045	98.0
BUTTE												
UPPER SHAUNAVON (VOLUNTARY UNIT)		8.916	5.50	9.50	15.00	0.490	0.847	1.337	0.703	0.634	33.239	82.5
UPPER SHAUNAVON (NON-UNIT)		0.243	5.50	0.00	5.50	0.013	0.000	0.013	0.001	0.012	1.389	13.5
CANTUAR EAST												
CANTUAR SAND (UNIT NO. 1)		4.814	3.10	2.00	5.10	0.149	0.096	0.245	0.154	0.091	9.559	20.9
CANTUAR SAND (UNIT NO. 2)		0.813	1.60	0.00	1.60	0.013	0.000	0.013	0.011	0.002	0.677	2.0
CANTUAR EAST												
ROSERAY SAND (UNIT NO. 1)		2.899	6.80	4.00	10.80	0.197	0.116	0.313	0.196	0.117	8.085	23.6
ROSERAY SAND (UNIT NO. 2)		1.989	11.40	2.80	14.20	0.227	0.056	0.283	0.218	0.065	5.484	13.5
ROSERAY SAND (NON-UNIT)		0.014	1.00	0.00	1.00	0.000	0.000	0.000	0.000	0.000	0.021	0.0
CANTUAR												
LOWER ROSERAY SAND (CANTUAR UNIT)		13.927	12.50	0.00	12.50	1.741	0.000	1.741	1.477	0.264	42.162	148.4
LOWER ROSERAY SAND (NON-UNIT)		0.032	0.50	0.00	0.50	0.000	0.000	0.000	0.000	0.000	0.000	0.0
CANTUAR MAIN												
CANTUAR SAND (CANTUAR UNIT)		22.107	8.70	10.70	19.40	1.923	2.365	4.288	3.685	0.603	97.707	232.6
CANTUAR SAND (NON-UNIT)		0.111	5.00	0.00	5.00	0.006	0.000	0.006	0.002	0.004	0.526	1.4
CLINTONVILLE												
SHAUNAVON		2.291	3.20	0.00	3.20	0.073	0.000	0.073	0.053	0.020	2.035	5.4
COVINGTON												
UPPER SHAUNAVON (COV. UNIT NO. 1)		1.071	14.00	5.50	19.50	0.130	0.059	0.209	0.207	0.002	0.972	2.3
COVINGTON WEST												
UPPER SHAUNAVON		0.839	12.00	0.00	12.00	0.101	0.000	0.101	0.074	0.027	3.382	8.6

INITIAL OIL IN PLACE M3/M3	AREA HA X1 000	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	WATER SATURATION PER CENT	FORMATION VOLUME FACTOR	DENSITY OF OIL KG/M3	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL	PRODUCING HORIZON
MISCELLANEOUS											
0.135	2.363	4.33	23.0	35.0	1.111	--	--	CRETACEOUS	--	VIKING SAND	
0.140	0.032	3.51	24.0	35.0	1.111	--	--	CRETACEOUS	--	VIKING CHERT	
TOTAL AREA II LIGHT											
AREA III - MEDIUM											
ANTELOPE LAKE											
0.105	0.442	2.13	18.0	40.0	1.025	914	1 037	JURASSIC	1964	UPPER SHAUNAVON (VOL UNIT)	
0.100	0.016	1.83	17.0	40.0	1.025	--	--	--	--	UPPER SHAUNAVON (NON-UNIT)	
ANTELOPE LAKE EAST											
0.138	0.032	4.20	23.3	37.0	1.070	923	950	JURASSIC	1964	ROSERAY SAND	
BATTLE CREEK											
0.115	0.049	7.62	16.0	25.0	1.047	997	1 390	MISSISSIPPIAN	1966	MADISON	
BATTLE CREEK											
0.084	0.129	4.57	12.5	25.0	1.111	945	1 337	JURASSIC	1966	UPPER SHAUNAVON	
BATTRUM NORTH											
0.131	0.210	8.19	22.7	41.0	1.026	937	866	JURASSIC	1979	ROSERAY SAND	
BATTRUM											
0.169	1.599	10.73	26.0	33.2	1.026	938	883	JURASSIC	1955	ROSERAY SAND (UNIT NO. 1)	
0.190	0.324	9.75	27.4	29.0	1.026	--	--	--	--	ROSERAY SAND (UNIT NO. 2)	
0.149	0.842	5.79	25.1	39.3	1.024	--	--	--	--	ROSERAY SAND (UNIT NO. 3)	
0.149	0.453	5.09	25.1	39.3	1.024	--	--	--	--	ROSERAY SAND (UNIT NO. 4)	
0.148	0.162	5.18	25.0	39.3	1.026	--	--	--	--	ROSERAY SAND (NON-UNIT)	
BENCH											
0.128	1.748	2.35	16.0	15.0	1.064	915	1 347	JURASSIC	1969	UPPER SHAUNAVON	
BEVERLEY											
0.113	1.246	4.97	22.6	46.1	1.076	920	991	CRETACEOUS	1969	CANTUAR SAND	
BEVERLEY NORTH											
0.118	0.842	7.60	23.0	45.0	1.076	932	969	CRETACEOUS	1967	CANTUAR SAND	
BEVERLEY											
0.161	0.805	3.11	28.0	38.8	1.063	926	983	JURASSIC	1952	UPPER ROSERAY SAND (BEV. UNIT NO. 1)	
0.161	0.113	3.11	28.0	38.8	1.063	929	--	--	--	UPPER ROSERAY SAND (NON-UNIT)	
BONE CREEK											
0.123	2.226	4.63	13.8	5.0	1.064	914	1 341	JURASSIC	1954	UPPER SHAUNAVON (UNIT)	
BUTTE											
0.164	2.137	2.54	22.8	25.0	1.041	914	1 338	JURASSIC	1967	UPPER SHAUNAVON (VOLUNTARY UNIT)	
0.164	0.130	1.14	22.8	25.0	1.041	--	--	--	--	UPPER SHAUNAVON (NON-UNIT)	
CANTUAR EAST											
0.122	0.763	5.18	23.3	43.6	1.079	920	964	CRETACEOUS	1956	CANTUAR SAND (UNIT NO. 1)	
0.122	0.146	4.57	23.3	43.6	1.079	929	--	--	--	CANTUAR SAND (UNIT NO. 2)	
CANTUAR EAST											
0.145	0.716	2.80	26.0	40.0	1.079	933	983	JURASSIC	1952	ROSERAY SAND (UNIT NO. 1)	
0.145	0.502	2.74	26.0	40.0	1.079	938	--	--	--	ROSERAY SAND (UNIT NO. 2)	
0.145	0.008	1.22	26.0	40.0	1.079	--	--	--	--	ROSERAY SAND (NON-UNIT)	
CANTUAR											
0.190	2.765	2.65	27.2	24.6	1.079	964	990	JURASSIC	1952	LOWER ROSERAY SAND (CANTUAR UNIT)	
0.190	0.008	2.13	27.2	24.6	1.079	--	--	--	--	LOWER ROSERAY SAND (NON-UNIT)	
CANTUAR MAIN											
0.138	3.166	5.06	26.4	43.6	1.079	922	975	CRETACEOUS	1952	CANTUAR SAND (CANTUAR UNIT)	
0.138	0.016	5.05	26.4	43.6	1.079	918	--	--	--	CANTUAR SAND (NON-UNIT)	
CLINTONVILLE											
0.097	0.389	6.10	13.7	25.0	1.064	915	1362	JURASSIC	1953	SHAUNAVON	
COVINGTON											
0.117	0.376	2.44	15.5	22.0	1.036	894	1 330	JURASSIC	1966	UPPER SHAUNAVON (COV. UNIT NO. 1)	
COVINGTON WEST											
0.066	0.259	4.88	11.8	25.0	1.333	906	1 336	JURASSIC	1969	UPPER SHAUNAVON	

POOL	PRODUCING HORIZON	INITIAL OIL IN PLACE	ESTIMATED RECOVERY			INITIAL RESERVES			CUMULATIVE PRODUCTION	REMAINING RESERVES	1984 PRODUCTION YEARLY TOTAL	DAILY AVERAGE
		3 M x 1 000 000	PRIMARY	ENHANCED	TOTAL	PRIMARY	ENHANCED	TOTAL	Dec. 31/84	3	3 M x 1 000	3 M / DAY
			PER CENT									
DELTA												
	UPPER SHAUNAVON (DELTA UNIT NO. 1)	9.383	12.00	13.20	25.20	1.126	1.239	2.365	2.129	0.236	35.864	90.4
	UPPER SHAUNAVON (DELTA UNIT NO. 2)	2.540	7.00	6.60	13.60	0.178	0.168	0.346	0.312	0.034	8.145	25.6
	UPPER SHAUNAVON (NON-UNIT)	0.936	12.50	0.00	12.50	0.117	0.000	0.117	0.079	0.038	3.316	8.3
DOLLARD												
	UPPER SHAUNAVON (UNIT)	26.064	20.00	30.00	50.00	5.213	7.819	13.032	12.404	0.628	138.378	338.1
	UPPER SHAUNAVON (E. DOLL. VOL UNIT)	1.648	20.00	19.00	39.00	0.330	0.313	0.643	0.541	0.102	18.988	57.8
	UPPER SHAUNAVON (NON-UNIT)	0.643	15.50	0.00	15.50	0.100	0.000	0.100	0.089	0.011	1.501	4.4
EASTBROOK												
	UPPER SHAUNAVON	0.482	11.90	0.00	11.90	0.057	0.000	0.057	0.032	0.025	2.191	4.6
EASTEND												
	SHAUNAVON	2.359	3.50	0.00	3.50	0.083	0.000	0.083	0.062	0.021	3.987	10.7
FOSTERTON												
	ROSERAY SAND (MAIN UNIT)	21.994	17.00	25.10	42.10	3.739	5.520	9.259	8.484	0.775	74.892	209.0
	ROSERAY SAND (H.W. UNIT)	1.978	11.00	18.00	29.00	0.218	0.356	0.574	0.532	0.042	8.720	28.4
	ROSERAY SAND (W. FOST. VOL UNIT)	1.220	11.00	29.00	40.00	0.134	0.354	0.488	0.436	0.052	6.660	19.6
GULL LAKE												
	BASAL CANTUAR SAND (VOL UNIT NO. 1)	1.906	4.80	15.50	20.30	0.091	0.295	0.386	0.243	0.143	16.246	45.1
	BASAL CANTUAR SAND (JOHNSTON UNIT)	1.030	6.50	8.50	15.00	0.057	0.088	0.155	0.130	0.025	3.070	10.3
	BASAL CANTUAR SAND (NON-UNIT)	0.474	7.40	0.00	7.40	0.035	0.000	0.035	0.030	0.005	0.000	0.0
GULL LAKE CENTRAL												
	UPPER SHAUNAVON (VOL UNIT NO. 1)	0.614	24.00	19.00	43.00	0.147	0.117	0.264	0.193	0.071	6.735	19.4
	UPPER SHAUNAVON (NON-UNIT)	0.591	23.00	0.00	23.00	0.136	0.000	0.136	0.094	0.042	7.190	18.7
GULL LAKE NORTH												
	UPPER SHAUNAVON (UNIT)	6.822	10.00	36.30	46.30	0.682	2.476	3.158	2.944	0.214	43.116	121.0
	UPPER SHAUNAVON (NON-UNIT)	0.361	10.50	0.00	10.50	0.038	0.000	0.038	0.031	0.007	1.661	3.7
GULL LAKE SOUTH												
	UPPER SHAUNAVON	1.454	12.40	0.00	12.40	0.180	0.000	0.180	0.119	0.061	3.913	10.1
HAZLET												
	ROSERAY SAND (UNIT)	1.742	24.00	0.00	24.00	0.418	0.000	0.418	0.387	0.031	5.808	14.3
	ROSERAY SAND (NON-UNIT)	0.063	0.50	0.00	0.50	0.000	0.000	0.000	0.000	0.000	0.000	0.0
ILLERBRUN												
	UPPER SHAUNAVON (VOLUNTARY UNIT)	3.503	16.60	13.40	30.00	0.581	0.469	1.050	0.899	0.151	22.412	64.2
	UPPER SHAUNAVON (NON-UNIT)	0.286	3.00	0.00	3.00	0.009	0.000	0.009	0.006	0.003	0.723	6.6
INSTON												
	UPPER SHAUNAVON (UNIT)	24.473	9.00	25.00	34.00	2.203	6.118	8.321	7.186	1.135	131.101	346.6
	UPPER SHAUNAVON (NON-UNIT)	3.182	9.00	0.00	9.00	0.286	0.000	0.286	0.032	0.254	29.682	74.5
JAVA												
	CANTUAR SAND	1.112	1.80	1.20	3.00	0.020	0.013	0.033	0.031	0.002	0.910	2.4
JOHNSTON												
	UPPER SHAUNAVON (JOHNSTON UNIT)	0.201	19.00	0.00	19.00	0.038	0.000	0.038	0.034	0.004	0.840	1.5
LEITCHVILLE												
	SHAUNAVON (VOLUNTARY UNIT)	4.936	2.50	2.70	5.20	0.123	0.133	0.256	0.206	0.050	5.212	13.1
	SHAUNAVON (NON-UNIT)	3.144	5.20	0.00	5.20	0.163	0.000	0.163	0.060	0.103	14.057	44.6
LEON LAKE												
	SHAUNAVON	4.938	5.00	1.20	6.20	0.247	0.059	0.306	0.251	0.055	7.867	19.1
MAIN SUCCESS												
	ROSERAY SAND (MAIN UNIT)	6.858	13.00	25.00	38.00	0.892	1.714	2.606	2.535	0.071	8.537	46.4
NORTH PREMIER												
	ROSERAY SAND (UNIT NO. 1)	4.017	15.00	28.00	43.00	0.603	1.125	1.728	1.623	0.105	18.949	43.5
	ROSERAY SAND (UNIT NO. 4)	4.611	15.00	32.50	47.50	0.695	1.505	2.200	2.073	0.127	29.858	94.2
	ROSERAY SAND (NON-UNIT)	0.796	8.00	0.00	8.00	0.064	0.000	0.064	0.019	0.045	4.992	20.4
NORTH PREMIER												
	UPPER SHAUNAVON (UNIT NO. 1)	0.323	6.00	0.00	6.00	0.019	0.000	0.019	0.017	0.002	0.794	2.3
	UPPER SHAUNAVON (VOLUNTARY UNIT)	0.942	6.00	8.50	14.50	0.057	0.080	0.137	0.107	0.030	4.345	11.3
	UPPER SHAUNAVON (UNIT NO. 4)	2.569	10.00	2.50	12.50	0.257	0.064	0.321	0.265	0.056	8.429	22.5
	UPPER SHAUNAVON (NON-UNIT)	0.791	9.00	0.00	9.00	0.071	0.000	0.071	0.043	0.028	4.335	11.5

INITIAL OIL IN PLACE M3/M3	AREA HA X1 000	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	WATER SATURATION PER CENT	FORMATION VOLUME FACTOR	DENSITY OF OIL KG/M3	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL	PRODUCING HORIZON
DELTA											
0.136	2.159	3.20	20.4	28.5	1.074	914	1 065	JURASSIC	1956	UPPER SHAUNAVON (DELTA UNIT NO. 1)	
0.093	0.716	3.81	20.0	50.0	1.074	--	--	--	--	UPPER SHAUNAVON (DELTA UNIT NO. 2)	
0.099	0.259	3.66	21.2	50.0	1.074	--	--	--	--	UPPER SHAUNAVON (NON-UNIT)	
DOLLARD											
0.162	3.642	4.42	20.0	12.0	1.087	914	1 402	JURASSIC	1953	UPPER SHAUNAVON (UNIT)	
0.110	0.469	3.20	17.2	30.6	1.087	--	--	--	--	UPPER SHAUNAVON (E. DOLL. VOL UNIT)	
0.169	0.089	4.27	20.9	12.0	1.087	--	--	--	--	UPPER SHAUNAVON (NON-UNIT)	
EASTBROOK											
0.095	0.098	5.18	13.6	25.0	1.075	926	1 420	JURASSIC	1966	UPPER SHAUNAVON	
EASTEND											
0.088	0.550	4.87	12.1	20.0	1.099	927	1 457	JURASSIC	1952	SHAUNAVON	
FOSTERTON											
0.222	1.012	9.81	28.8	19.0	1.053	907	975	CRET.-JUR.	1952	ROSERAY SAND (MAIN UNIT)	
0.225	0.104	8.44	28.8	19.0	1.035	933	--	--	--	ROSERAY SAND (N.W. UNIT)	
0.166	0.146	5.03	25.0	30.0	1.053	--	--	--	--	ROSERAY SAND (W. FOST. VOL UNIT)	
GULL LAKE											
0.173	0.377	2.93	26.5	30.0	1.075	914	1 100	CRETACEOUS	1953	BASAL CANTUAR SAND (VOL UNIT NO. 1)	
0.119	0.132	6.58	21.1	39.5	1.076	--	--	--	--	BASAL CANTUAR SAND (JOHNSTON UNIT)	
0.118	0.061	6.58	21.0	39.5	1.076	927	--	--	--	BASAL CANTUAR SAND (NON-UNIT)	
GULL LAKE CENTRAL											
0.084	0.453	1.62	16.9	46.5	1.080	914	1 194	JURASSIC	1953	UPPER SHAUNAVON (VOL UNIT NO. 1)	
0.084	0.420	1.68	16.9	46.5	1.080	907	--	--	--	UPPER SHAUNAVON (NON-UNIT)	
GULL LAKE NORTH											
0.141	1.230	3.93	19.4	25.0	1.031	964	1 158	JURASSIC	1953	UPPER SHAUNAVON (UNIT)	
0.141	0.065	3.93	19.4	25.0	1.031	920	--	--	--	UPPER SHAUNAVON (NON-UNIT)	
GULL LAKE SOUTH											
0.164	0.995	0.89	24.7	30.0	1.053	891	1 325	JURASSIC	1952	UPPER SHAUNAVON	
HAZLET											
0.173	0.191	5.27	23.0	21.0	1.050	920	963	JURASSIC	1963	ROSERAY SAND (UNIT)	
0.173	0.016	2.29	23.0	21.0	1.050	--	--	--	--	ROSERAY SAND (NON-UNIT)	
ILLERBRUN											
0.129	0.453	6.01	16.0	15.0	1.057	885	1 280	JURASSIC	1965	UPPER SHAUNAVON (VOLUNTARY UNIT)	
0.120	0.065	3.66	16.3	22.0	1.057	--	--	--	--	UPPER SHAUNAVON (NON-UNIT)	
INSTON											
0.123	4.244	4.68	13.8	5.0	1.064	914	1 371	JURASSIC	1954	UPPER SHAUNAVON (UNIT)	
0.111	0.324	8.87	12.4	5.0	1.064	922	--	--	--	UPPER SHAUNAVON (NON-UNIT)	
JAVA											
0.163	0.185	3.70	29.0	40.0	1.071	947	1 013	CRETACEOUS	1955	CANTUAR SAND	
JOHNSTON											
0.135	0.061	2.44	16.4	15.0	1.031	914	1 188	JURASSIC	1953	UPPER SHAUNAVON (JOHNSTON UNIT)	
LEITCHVILLE											
0.110	0.971	4.63	15.7	25.6	1.064	914	1 371	JURASSIC	1960	SHAUNAVON (VOLUNTARY UNIT)	
0.127	1.424	1.74	15.0	10.0	1.064	923	--	--	--	SHAUNAVON (NON-UNIT)	
LEDN LAKE											
0.135	1.035	3.54	17.3	15.0	1.091	922	1 371	JURASSIC	1953	SHAUNAVON	
MAIN SUCCESS											
0.197	0.770	4.51	26.8	19.9	1.087	914	975	JURASSIC	1952	ROSERAY SAND (MAIN UNIT)	
NORTH PREMIER											
0.237	0.364	4.66	32.9	25.0	1.042	968	1 005	JURASSIC	1953	ROSERAY SAND (UNIT NO. 1)	
0.164	0.635	4.45	26.7	35.8	1.046	--	--	--	--	ROSERAY SAND (UNIT NO. 4)	
0.237	0.065	5.17	32.9	25.0	1.042	917	--	--	--	ROSERAY SAND (NON-UNIT)	
NORTH PREMIER											
0.109	0.065	4.57	16.1	25.0	1.111	914	1 066	JURASSIC	1953	UPPER SHAUNAVON (UNIT NO. 1)	
0.096	0.291	3.36	16.9	40.0	1.053	--	--	--	--	UPPER SHAUNAVON (VOLUNTARY UNIT)	
0.099	0.809	3.20	19.0	45.0	1.053	--	--	--	--	UPPER SHAUNAVON (UNIT NO. 4)	
0.099	0.194	4.11	19.0	45.0	1.053	--	--	--	--	UPPER SHAUNAVON (NON-UNIT)	

POOL	PRODUCING HORIZON	INITIAL OIL IN PLACE	ESTIMATED RECOVERY			INITIAL RESERVES			CUMULATIVE PRODUCTION	REMAINING	1984 PRODUCTION	DAILY AVERAGE
		3 M x 1 000 000	PRIMARY	ENHANCED	TOTAL	PRIMARY	ENHANCED	TOTAL	Dec. 31/84	RESERVES	YEARLY TOTAL	
			PER CENT			-----M x 1 000 000-----					M x 1 000	M / DAY
PENNANT												
	UPPER SHAUNAVON	0.751	12.00	0.00	12.00	0.090	0.000	0.090	0.071	0.019	4.054	10.6
RAPDAN												
	UPPER SHAUNAVON (UNIT)	17.267	6.10	11.20	17.30	1.053	1.934	2.987	2.411	0.576	71.167	175.3
	UPPER SHAUNAVON (N. RAPDAN VOL UNIT)	3.974	3.00	1.60	4.60	0.119	0.064	0.183	0.155	0.028	4.944	13.0
	UPPER SHAUNAVON (VOL UNIT NO. 2)	1.694	3.80	7.50	11.30	0.064	0.127	0.191	0.118	0.073	5.902	12.1
	UPPER SHAUNAVON (NON-UNIT)	0.235	3.00	0.00	3.00	0.007	0.000	0.007	0.005	0.002	0.467	0.0
RAPDAN WEST												
	SHAUNAVON	3.812	5.70	0.00	5.70	0.217	0.000	0.217	0.121	0.096	9.945	37.4
SOUTH SUCCESS												
	ROSERAY SAND (SOUTHWEST UNIT)	2.309	8.70	0.00	8.70	0.201	0.000	0.201	0.072	0.129	25.552	54.4
	ROSERAY SAND (SUCCESS UNIT)	8.563	13.20	31.30	44.50	1.130	2.680	3.810	3.288	0.522	47.780	131.4
SUCCESS ALPHA												
	ROSERAY SAND (ALPHA UNIT)	1.440	14.30	27.70	42.00	0.206	0.399	0.605	0.548	0.057	6.561	25.9
SUCCESS NORTH												
	ROSERAY SAND (VOLUNTARY UNIT)	2.098	11.50	0.00	11.50	0.241	0.000	0.241	0.073	0.168	22.954	62.4
SUFFIELD												
	ROSERAY SAND (UNIT NO. 1)	1.878	15.00	50.00	65.00	0.282	0.939	1.221	1.044	0.177	32.867	80.7
	ROSERAY SAND (UNIT NO. 3)	2.780	13.00	35.50	48.50	0.361	0.987	1.348	1.076	0.272	51.596	121.4
	ROSERAY SAND (NON-UNIT)	0.107	1.00	0.00	1.00	0.001	0.000	0.001	0.000	0.001	0.000	0.0
SUFFIELD												
	UPPER SHAUNAVON (UNIT NO. 2)	3.222	7.00	17.50	24.50	0.226	0.564	0.790	0.586	0.204	20.944	56.2
	UPPER SHAUNAVON (UNIT NO. 3)	0.820	10.00	18.50	28.50	0.082	0.152	0.234	0.189	0.045	7.120	20.2
	UPPER SHAUNAVON (NON-UNIT)	0.588	7.50	0.00	7.50	0.044	0.000	0.044	0.042	0.002	1.207	2.4
VERLO												
	ROSERAY SAND (VERLO ROSERAY SD UNIT)	8.349	3.50	20.00	23.50	0.292	1.670	1.962	1.396	0.566	81.068	186.4
WHITEMUD												
	UPPER SHAUNAVON	1.640	3.10	0.00	3.10	0.051	0.000	0.051	0.045	0.006	1.349	3.6
MISCELLANEOUS												
	BASAL MANNVILLE SAND	0.334	3.00	0.00	3.00	0.010	0.000	0.010	0.009	0.001	0.000	0.0
	CANTUAR SAND	10.144	3.10	0.00	3.10	0.314	0.000	0.314	0.236	0.078	13.105	27.4
	GRAVELBOURG	0.165	9.00	0.00	9.00	0.015	0.000	0.015	0.012	0.003	1.102	2.7
	PREMIER SAND (N. PREMIER UNIT NO. 2)	0.232	15.00	12.00	27.00	0.035	0.028	0.063	0.059	0.004	0.823	2.3
	ROSERAY SAND	9.748	5.00	0.00	5.00	0.487	0.000	0.487	0.300	0.187	25.638	70.4
	LOWER ROSERAY	0.065	1.90	0.00	1.90	0.001	0.000	0.001	0.001	0.000	0.000	0.0
	UPPER ROSERAY	0.145	4.00	0.00	4.00	0.006	0.000	0.006	0.005	0.001	0.843	2.7
	SHAUNAVON	0.130	0.50	0.00	0.50	0.001	0.000	0.001	0.000	0.001	0.000	0.0
	LOWER SHAUNAVON	1.637	4.20	0.00	4.20	0.069	0.000	0.069	0.050	0.019	2.807	7.2
	UPPER SHAUNAVON	8.729	5.50	0.00	5.50	0.480	0.000	0.480	0.299	0.181	38.860	132.2
TOTAL AREA III MEDIUM		392.352				37.606	53.094	90.700	76.113	14.587	1811.053	4797.2

AREA IV - MEDIUM

BEWSON												
	MIDALE (UNIT)	8.079	6.00	21.40	27.40	0.485	1.729	2.214	1.430	0.784	42.760	126.9
	MIDALE (VOLUNTARY UNIT NO. 1)	2.265	5.00	14.80	19.80	0.113	0.335	0.448	0.351	0.097	10.086	26.4
	MIDALE (NON-UNIT)	4.218	11.00	0.00	11.00	0.464	0.000	0.464	0.198	0.266	16.961	91.2
BROWNHEAD												
	MIDALE	2.691	10.30	0.00	10.30	0.277	0.000	0.277	0.245	0.032	6.413	16.9
BRYANT												
	FROBISHER	0.338	9.60	0.00	9.60	0.032	0.000	0.032	0.009	0.023	3.321	7.2
BRYANT												
	MIDALE	2.395	3.40	0.00	3.40	0.081	0.000	0.081	0.033	0.048	6.903	19.3
FLAT LAKE												
	RATCLIFFE (NON-UNIT)	0.192	10.00	0.00	10.00	0.019	0.000	0.019	0.003	0.016	0.876	2.2
FREESTONE												
	FROBISHER-ALIDA	1.088	38.00	0.00	38.00	0.413	0.000	0.413	0.286	0.127	18.243	59.7

INITIAL OIL IN PLACE M3/M3	AREA HA X1 000	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	WATER SATURATION PER CENT	FORMATION VOLUME FACTOR	DENSITY OF OIL KG/M3	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL PRODUCING HORIZON
0.128	0.243	2.41	18.0	25.0	1.053	928	990	JURASSIC	1965	PENMANT UPPER SHAUNAVON
0.136	2.784	4.57	15.4	5.0	1.078	914	1 402	JURASSIC	1953	RAPDAN UPPER SHAUNAVON (UNIT)
0.158	0.497	5.06	17.7	5.0	1.064	--	--	--	--	UPPER SHAUNAVON (N.RAPDAN VOL UNIT)
0.115	0.259	5.67	13.7	9.5	1.075	--	--	--	--	UPPER SHAUNAVON (VOL UNIT NO. 2)
0.148	0.065	2.44	16.6	5.0	1.064	919	--	--	--	UPPER SHAUNAVON (NON-UNIT)
0.134	0.873	3.26	15.0	5.0	1.064	921	1 407	JURASSIC	1955	RAPDAN WEST SHAUNAVON
0.156	0.261	5.66	24.0	30.0	1.075	934	975	JURASSIC	1953	SOUTH SUCCESS ROSERAY SAND (SOUTHWEST UNIT)
0.193	0.732	6.07	27.4	23.4	1.089	914	--	--	--	ROSERAY SAND (SUCCESS UNIT)
0.178	0.176	4.60	24.8	22.9	1.075	920	975	JURASSIC	1953	SUCCESS ALPHA ROSERAY SAND (ALPHA UNIT)
0.148	0.259	5.48	22.7	30.0	1.075	929	966	JURASSIC	1966	SUCCESS NORTH ROSERAY SAND (VOLUNTARY UNIT)
0.171	0.341	3.23	26.0	29.3	1.078	919	1 036	JURASSIC	1954	SUFFIELD ROSERAY SAND (UNIT NO. 1)
0.157	0.593	2.99	26.0	35.0	1.078	--	--	--	--	ROSERAY SAND (UNIT NO. 3)
0.157	0.032	2.13	26.0	35.0	1.078	--	--	--	--	ROSERAY SAND (NON-UNIT)
0.128	0.699	3.60	17.6	25.0	1.031	914	1 097	JURASSIC	1954	SUFFIELD UPPER SHAUNAVON (UNIT NO. 2)
0.152	0.269	2.01	21.2	25.0	1.048	--	--	--	--	UPPER SHAUNAVON (UNIT NO. 3)
0.124	0.130	3.66	17.0	25.0	1.031	937	--	--	--	UPPER SHAUNAVON (NON-UNIT)
0.181	0.898	5.15	27.5	29.1	1.080	920	963	JURASSIC	1956	VERLO ROSERAY SAND (VERLO ROSERAY SD UNIT)
0.163	0.323	3.11	22.1	20.0	1.083	924	1 432	JURASSIC	1953	WHITEMUD UPPER SHAUNAVON
0.113	0.065	4.57	20.0	25.0	1.333	--	--	CRETACEOUS	--	MISCELLANEOUS BASAL MANNVILLE SAND
0.144	0.955	7.35	23.9	35.0	1.075	--	--	CRETACEOUS	--	CANTUAR SAND
0.093	0.065	2.74	16.5	25.0	1.333	--	--	JURASSIC	--	GRAVELBOURG
0.221	0.075	1.40	30.8	25.0	1.046	--	--	CRETACEOUS	--	PREMIER SAND (N. PREMIER UNIT NO. 2)
0.174	0.983	5.70	23.8	25.0	1.026	--	--	JURASSIC	--	ROSERAY SAND
0.190	0.016	2.13	27.2	24.6	1.079	--	--	JURASSIC	--	LOWER ROSERAY
0.181	0.016	4.98	26.0	25.0	1.075	--	--	JURASSIC	--	UPPER ROSERAY
0.074	0.032	5.49	10.4	25.0	1.053	--	--	JURASSIC	--	SHAUNAVON
0.109	0.259	5.80	15.3	25.0	1.053	--	--	JURASSIC	--	LOWER SHAUNAVON
0.105	1.748	4.74	15.1	25.0	1.075	--	--	JURASSIC	--	UPPER SHAUNAVON
										TOTAL AREA III MEDIUM
										AREA IV - MEDIUM
0.151	2.978	1.80	24.2	30.0	1.124	875	1 371	MISSISSIPPIAN	1956	BENSON MIDALE (UNIT)
0.151	1.117	1.34	24.3	30.0	1.124	--	--	--	--	MIDALE (VOLUNTARY UNIT NO. 1)
0.113	1.618	2.30	18.2	30.0	1.124	886	--	--	--	MIDALE (NON-UNIT)
0.079	0.729	4.66	13.7	35.0	1.124	903	1 693	MISSISSIPPIAN	1965	BROWNHEAD MIDALE
0.041	0.192	4.30	9.1	50.0	1.112	895	1 433	MISSISSIPPIAN	1979	BRYANT PROBISHER
0.137	1.167	1.50	28.5	46.0	1.125	904	1 406	MISSISSIPPIAN	1979	BRYANT MIDALE
0.034	0.065	8.60	8.1	49.2	1.199	867	1 956	MISSISSIPPIAN	1965	FLAT LAKE RATCLIFFE (NON-UNIT)
0.059	0.871	2.10	12.2	35.0	1.333	879	1 180	MISSISSIPPIAN	1953	FREESTONE PROBISHER-ALIDA

POOL	PRODUCING HORIZON	INITIAL OIL	ESTIMATED RECOVERY		INITIAL RESERVES			CUMULATIVE PRODUCTION Dec. 31/84	REMAINING RESERVES	1984 PRODUCTION YEARLY TOTAL	DAILY AVERAGE	
		IN PLACE 3 M x 1 000 000	PRIMARY	ENHANCED TOTAL	PRIMARY	ENHANCED TOTAL 3 M x 1 000 000						
GRIFFIN												
	FROBISHER	0.636	20.00	0.00	20.00	0.127	0.000	0.127	0.125	0.002	1.396	4.1
	HANDSWORTH											
	ALIDA	3.635	12.10	0.00	12.10	0.440	0.000	0.440	0.378	0.062	10.092	25.6
	HARTAVEN											
	FROBISHER-ALIDA	0.562	26.20	0.00	26.20	0.147	0.000	0.147	0.073	0.074	7.082	18.2
	HOFFER											
	RATCLIFFE LOWER POOL	1.275	17.00	0.00	17.00	0.217	0.000	0.217	0.211	0.006	0.739	1.9
	HOFFER											
	RATCLIFFE UPPER POOL	0.318	14.10	0.00	14.10	0.045	0.000	0.045	0.037	0.008	1.046	3.0
	HUME											
	FROBISHER	0.891	23.00	0.00	23.00	0.205	0.000	0.205	0.175	0.030	5.044	12.5
	HUME											
	MIDALE	1.123	14.00	0.00	14.00	0.157	0.000	0.157	0.132	0.025	6.293	17.0
	HUMMINGBIRD											
	RATCLIFFE (VOLUNTARY UNIT NO. 1)	4.114	10.00	6.40	16.40	0.411	0.263	0.674	0.474	0.200	16.058	42.0
	HUNTOON											
	FROBISHER	3.450	14.70	0.00	14.70	0.507	0.000	0.507	0.487	0.020	11.220	37.3
	HUNTOON											
	MIDALE (VOL. UNIT NO. 1)	4.443	5.00	3.80	8.80	0.222	0.169	0.391	0.283	0.108	8.231	20.9
	MIDALE (NON-UNIT)	0.757	16.00	0.00	16.00	0.121	0.000	0.121	0.044	0.077	6.590	37.4
	INGOLDSBY											
	FROBISHER-ALIDA (NON-UNIT)	5.980	31.20	0.00	31.20	1.866	0.000	1.866	1.470	0.396	28.337	71.9
	IRNES											
	FROBISHER	11.402	19.30	0.00	19.30	2.201	0.000	2.201	1.727	0.474	48.641	130.4
	LAKE ALMA											
	RATCLIFFE (VOLUNTARY UNIT)	1.827	17.00	38.70	55.70	0.311	0.707	1.018	0.615	0.403	28.363	68.9
	LOST HORSE HILL											
	FROBISHER-ALIDA (VOL UNIT NO. 1)	8.209	26.00	0.00	26.00	2.134	0.000	2.134	1.876	0.258	36.791	97.7
	FROBISHER-ALIDA (NON-UNIT)	4.299	24.50	0.00	24.50	1.053	0.000	1.053	0.771	0.282	26.036	78.7
	LOUGHEED											
	MIDALE	4.915	14.70	0.00	14.70	0.723	0.000	0.723	0.478	0.245	16.980	53.4
	MACOUN											
	MIDALE	2.044	17.00	0.00	17.00	0.347	0.000	0.347	0.254	0.093	14.616	36.2
	MACOUN WEST											
	MIDALE	0.989	7.20	0.00	7.20	0.071	0.000	0.071	0.038	0.033	5.022	12.3
	MELROSE											
	FROBISHER-ALIDA	1.004	13.60	0.00	13.60	0.137	0.000	0.137	0.115	0.022	2.751	7.7
	MIDALE											
	CENTRAL-FROBISHER	3.810	25.50	0.00	25.50	0.972	0.000	0.972	0.880	0.092	9.113	23.1
	MIDALE											
	CENTRAL MIDALE (UNIT)	56.802	16.90	14.50	31.40	9.600	8.236	17.836	14.620	3.216	252.871	707.7
	CENTRAL MIDALE (NON-UNIT)	9.805	15.40	0.00	15.40	1.510	0.000	1.510	1.108	0.402	54.822	153.0
	MINARD											
	MIDALE	0.269	5.60	0.00	5.60	0.015	0.000	0.015	0.005	0.010	1.073	3.1
	MOOSE VALLEY											
	TILSTON	0.734	10.20	0.00	10.20	0.075	0.000	0.075	0.063	0.012	4.029	13.3
	NEPTUNE											
	RATCLIFFE	4.068	12.00	0.00	12.00	0.488	0.000	0.488	0.243	0.245	16.888	50.0
	NORTH HANDSWORTH											
	ALIDA	1.712	24.80	0.00	24.80	0.425	0.000	0.425	0.296	0.129	12.789	35.1
	DUNCRE											
	RATCLIFFE (VOLUNTARY UNIT NO. 1)	14.529	7.60	5.50	13.10	1.104	0.799	1.903	1.018	0.885	44.297	120.7
	RATCLIFFE (NON-UNIT)	1.827	10.50	0.00	10.50	0.192	0.000	0.192	0.068	0.124	10.143	29.2
	RALPH											
	MIDALE	0.848	17.00	0.00	17.00	0.144	0.000	0.144	0.122	0.022	6.143	16.0
	SKINNER LAKE											
	RATCLIFFE	1.005	4.00	0.00	4.00	0.040	0.000	0.040	0.001	0.039	1.463	12.4

INITIAL OIL IN PLACE M3/M3	AREA HA X1 000	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	WATER SATURATION PER CENT	FORMATION VOLUME FACTOR	DENSITY OF OIL KG/M3	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL PRODUCING HORIZON
0.047	0.453	2.99	8.4	35.0	1.163	885	1 302	MISSISSIPPIAN	1958	GRIFFIN FROBISHER
0.054	1.101	6.10	11.1	35.0	1.333	886	1 204	MISSISSIPPIAN	1964	HANDSWORTH ALIDA
0.073	0.226	3.40	13.7	40.0	1.124	876	1 199	MISSISSIPPIAN	1965	HARTAVEN FROBISHER-ALIDA
0.072	0.259	6.81	13.9	35.0	1.250	869	1 935	MISSISSIPPIAN	1964	HOFFER RATCLIFFE LOWER POOL
0.071	0.130	3.43	13.7	35.0	1.250	875	1 927	MISSISSIPPIAN	1964	HOFFER RATCLIFFE UPPER POOL
0.052	0.453	3.78	9.0	35.0	1.124	883	1 350	MISSISSIPPIAN	1967	HUME FROBISHER
0.069	0.777	2.10	11.9	35.0	1.124	869	1 332	MISSISSIPPIAN	1968	HUME MIDALE
0.087	0.442	10.70	14.0	30.6	1.117	870	1 890	MISSISSIPPIAN	1966	HUMMINGBIRD RATCLIFFE (VOLUNTARY UNIT NO. 1)
0.058	1.956	3.05	10.0	35.0	1.124	892	1 371	MISSISSIPPIAN	1957	HUNTOON FROBISHER
0.104	1.230	3.47	18.0	35.0	1.124	874	1 359	MISSISSIPPIAN	1957	HUNTOON MIDALE (VOL. UNIT NO. 1)
0.049	0.631	2.44	8.5	35.0	1.124	890	--	--	--	MIDALE (NON-UNIT)
0.079	1.150	6.60	13.0	30.0	1.155	876	1 089	MISSISSIPPIAN	1955	INGOLDSBY FROBISHER-ALIDA (NON-UNIT)
0.056	1.912	10.67	10.0	35.0	1.163	891	1 333	MISSISSIPPIAN	1965	INNES FROBISHER
0.128	0.354	4.02	23.5	40.0	1.098	874	1 981	MISSISSIPPIAN	1965	LAKE ALMA RATCLIFFE (VOLUNTARY UNIT)
0.077	0.583	18.29	15.3	45.0	1.093	848	1 173	MISSISSIPPIAN	1963	LOST HORSE HILL FROBISHER-ALIDA (VOL UNIT NO. 1)
0.082	0.680	7.74	15.3	40.0	1.124	897	--	--	--	FROBISHER-ALIDA (NON-UNIT)
0.100	0.810	6.10	17.2	35.0	1.124	873	1 407	MISSISSIPPIAN	1959	LOUGHED MIDALE
0.064	1.003	3.17	11.5	35.0	1.163	895	1 531	MISSISSIPPIAN	1969	MACOUN MIDALE
0.041	0.323	7.44	8.7	45.0	1.163	888	1 559	MISSISSIPPIAN	1970	MACOUN WEST MIDALE
0.070	0.259	5.58	14.2	45.0	1.124	878	1 169	MISSISSIPPIAN	1963	MELROSE FROBISHER-ALIDA
0.055	1.088	6.40	12.3	50.0	1.124	881	1 411	MISSISSIPPIAN	1953	MIDALE CENTRAL-FROBISHER
0.088	12.335	5.24	16.3	39.4	1.124	877	1 402	MISSISSIPPIAN	1953	MIDALE CENTRAL MIDALE (UNIT)
0.097	3.321	3.05	17.0	36.0	1.124	883	--	--	--	CENTRAL MIDALE (NON-UNIT)
0.131	0.128	1.60	29.5	45.0	1.234	905	1 340	MISSISSIPPIAN	1956	MINARD MIDALE
0.072	0.129	7.92	13.3	40.0	1.111	909	1 163	MISSISSIPPIAN	1958	MOOSE VALLEY TILSTON
0.094	1.068	4.05	15.0	45.0	1.111	910	1 764	MISSISSIPPIAN	1967	NEPTUNE RATCLIFFE
0.048	0.776	4.57	9.9	35.0	1.333	885	1 176	MISSISSIPPIAN	1965	NORTH HANDSWORTH ALIDA
0.080	2.784	6.52	17.9	45.0	1.230	867	1 828	MISSISSIPPIAN	1959	DUNGRE RATCLIFFE (VOLUNTARY UNIT NO. 1)
0.107	0.842	2.03	23.9	45.0	1.230	878	--	--	--	RATCLIFFE (NON-UNIT)
0.051	0.745	2.25	12.9	55.9	1.124	863	1 315	MISSISSIPPIAN	1973	RALPH MIDALE
0.119	0.194	4.36	24.0	45.0	1.111	--	1 723	MISSISSIPPIAN	1969	SKINNER LAKE RATCLIFFE

POOL	PRODUCING HORIZON	INITIAL OIL IN PLACE	ESTIMATED RECOVERY		INITIAL RESERVES			CUMULATIVE PRODUCTION	REMAINING	1984 YEARLY	PRODUCTION DAILY	
		3 M x1 000 000	PRIMARY	ENHANCED TOTAL	PRIMARY	ENHANCED TOTAL	3 M x 1 000 000	Dec. 31/84	RESERVES	TOTAL 3	AVERAGE 3 M /DAY	
STOUGHTON				PER CENT								
	FROBISHER-ALIDA	1.114	33.00	0.00	33.00	0.368	0.000	0.368	0.312	0.036	6.771	17.3
STOUGHTON SOUTH												
	FROBISHER	1.527	8.80	0.00	8.80	0.134	0.000	0.134	0.101	0.033	7.185	19.4
TATAGWA												
	MIDALE	12.502	6.50	0.00	6.50	0.813	0.000	0.813	0.178	0.635	63.834	167.6
VIEWFIELD												
	FROBISHER (NON-UNIT)	7.667	15.50	0.00	15.50	1.188	0.000	1.188	0.534	0.654	47.719	120.2
VIEW HILL												
	MIDALE	0.683	25.80	0.00	25.80	0.176	0.000	0.176	0.146	0.030	3.262	8.3
WAPELLA												
	WAPELLA SAND	4.096	44.80	0.00	44.80	1.835	0.000	1.835	1.153	0.682	54.159	170.2
WEIR HILL												
	FROBISHER	0.957	5.90	0.00	5.90	0.056	0.000	0.056	0.047	0.009	1.799	5.0
WEST INNES												
	FROBISHER	0.694	24.00	0.00	24.00	0.167	0.000	0.167	0.157	0.010	1.996	5.4
WEST KINGSFORD												
	MIDALE (CULLEN UNIT)	0.882	50.90	0.00	50.90	0.449	0.000	0.449	0.409	0.040	5.894	16.0
	MIDALE (NON-UNIT)	2.631	23.30	0.00	23.30	0.613	0.000	0.613	0.507	0.106	9.486	29.2
WEYBURN												
	FROBISHER	3.006	19.30	0.00	19.30	0.580	0.000	0.580	0.392	0.188	20.178	55.4
WEYBURN												
	MIDALE (UNIT)	176.185	13.50	15.50	29.00	23.785	27.309	51.094	40.668	10.426	651.922	1721.4
	MIDALE (NON-UNIT)	17.390	11.50	0.00	11.50	2.000	0.000	2.000	1.121	0.879	103.761	351.7
WEYBURN NORTH												
	FROBISHER	0.535	10.90	0.00	10.90	0.058	0.000	0.058	0.017	0.041	7.152	19.1
WEYBURN NORTH												
	MIDALE	0.914	5.50	0.00	5.50	0.050	0.000	0.050	0.012	0.038	5.533	23.9
MISCELLANEOUS												
	ALIDA	0.284	19.80	0.00	19.80	0.056	0.000	0.056	0.040	0.016	2.436	5.6
	BAKKEN	0.209	3.80	0.00	3.80	0.008	0.000	0.008	0.002	0.006	1.436	3.5
	FROBISHER	3.030	12.70	0.00	12.70	0.385	0.000	0.385	0.201	0.184	27.306	84.4
	FROBISHER-ALIDA	0.193	5.60	0.00	5.60	0.011	0.000	0.011	0.007	0.004	0.270	1.7
	JURASSIC	4.054	8.00	0.00	8.00	0.324	0.000	0.324	0.131	0.193	17.867	71.7
	LOWER WATROUS	0.110	22.00	0.00	22.00	0.024	0.000	0.024	0.016	0.008	0.739	1.4
	MIDALE	19.507	4.80	0.00	4.80	0.936	0.000	0.936	0.323	0.613	87.061	314.3
	RATCLIFFE	4.563	8.40	0.00	8.40	0.383	0.000	0.383	0.182	0.201	19.043	49.6
	SOURIS VALLEY	0.166	4.20	0.00	4.20	0.007	0.000	0.007	0.004	0.003	2.007	3.9
TOTAL AREA IV MEDIUM		441.447				62.297	39.547	101.844	77.402	24.442	1949.339	5557.0

AREA IV - LIGHT

ALAMEDA											
MIDALE (CENTRAL UNIT)	1.166	11.70	26.20	37.90	0.136	0.305	0.441	0.368	0.073	7.547	20.5
MIDALE (EAST UNIT)	4.844	16.00	22.80	38.80	0.775	1.104	1.879	1.443	0.436	28.333	80.3
MIDALE (NORTH UNIT)	1.001	12.00	16.90	28.90	0.120	0.169	0.289	0.247	0.042	3.830	9.9
MIDALE (SOUTH UNIT)	1.792	13.30	12.00	25.30	0.238	0.215	0.453	0.398	0.055	6.949	18.5
MIDALE (NON-UNIT)	2.801	11.00	0.00	11.00	0.308	0.000	0.308	0.134	0.174	17.204	54.5
ALAMEDA WEST											
FROBISHER	0.151	1.00	0.00	1.00	0.002	0.000	0.002	0.000	0.002	0.000	0.0
ALAMEDA WEST											
MIDALE (VOLUNTARY UNIT NO.1)	0.771	11.20	19.70	30.90	0.086	0.152	0.238	0.020	0.218	8.888	15.2
MIDALE (NON-UNIT)	0.122	3.30	0.00	3.30	0.004	0.000	0.004	0.001	0.003	0.480	1.1
ALIDA EAST											
ALIDA (UNIT)	11.208	18.00	0.00	18.00	2.017	0.000	2.017	1.759	0.258	23.740	62.3
ALIDA (NON-UNIT)	0.316	11.00	0.00	11.00	0.035	0.000	0.035	0.030	0.005	1.050	2.8
ALIDA WEST											
ALIDA	6.892	30.20	0.00	30.20	2.081	0.000	2.081	1.734	0.347	34.857	94.1

INITIAL OIL IN PLACE M3/M3	AREA HA X1 000	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	WATER SATURATION PER CENT	FORMATION VOLUME FACTOR	DENSITY OF OIL KG/M3	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL PRODUCING HORIZON
0.055	0.473	4.30	9.8	35.0	1.163	882	1 268	MISSISSIPPIAN	1960	STOUGHTON FROBISHER-ALIDA
0.036	0.518	8.20	7.6	45.0	1.163	892	1 265	MISSISSIPPIAN	1974	STOUGHTON SOUTH FROBISHER
0.098	1.133	11.30	16.3	35.0	1.085	904	1 478	MISSISSIPPIAN	1977	TATAGNA MIDALE
0.058	0.997	13.23	10.4	35.0	1.163	872	1 270	MISSISSIPPIAN	1969	VIEWFIELD FROBISHER (NON-UNIT)
0.051	0.259	5.18	11.5	50.0	1.129	885	1 539	MISSISSIPPIAN	1959	VIEW HILL MIDALE
0.173	0.712	3.32	25.0	30.0	1.010	906	701	CRET-JURASSIC	1952	WAPELLA WAPELLA SAND
0.053	0.178	10.21	10.8	35.0	1.333	871	1 353	MISSISSIPPIAN	1968	WEIR HILL FROBISHER
0.050	0.259	5.33	9.0	35.0	1.163	893	1 335	MISSISSIPPIAN	1965	WEST INNES FROBISHER
0.057	0.291	5.36	10.4	35.0	1.196	895	1 485	MISSISSIPPIAN	1955	WEST KINGSFORD MIDALE (CULLEN UNIT)
0.063	0.766	5.49	11.6	35.0	1.205	882	--	--	--	MIDALE (NON-UNIT)
0.051	1.197	4.90	9.6	40.0	1.124	876	1 417	MISSISSIPPIAN	1954	WEYBURN FROBISHER
0.105	21.529	7.83	17.2	31.7	1.124	884	1 399	MISSISSIPPIAN	1954	WEYBURN MIDALE (UNIT)
0.106	4.500	3.66	17.2	31.0	1.124	877	--	--	--	MIDALE (NON-UNIT)
0.049	0.324	3.36	9.2	40.0	1.124	886	1 376	MISSISSIPPIAN	1965	WEYBURN NORTH FROBISHER
0.048	0.583	3.30	8.9	40.0	1.124	879	1 354	MISSISSIPPIAN	1956	WEYBURN NORTH MIDALE
0.068	0.065	6.40	14.0	35.0	1.333	880	--	MISSISSIPPIAN	--	MISCELLANEOUS ALIDA
0.058	0.129	2.80	8.2	25.0	1.064	--	--	MISSISSIPPIAN	--	BAKKEN
0.031	1.361	7.15	7.0	50.0	1.124	885	--	MISSISSIPPIAN	--	FROBISHER
0.049	0.065	6.10	10.0	35.0	1.333	874	--	MISSISSIPPIAN	--	FROBISHER-ALIDA
0.173	0.512	4.57	25.0	30.0	1.010	897	--	JURASSIC	--	JURASSIC
0.105	0.049	2.13	18.7	25.0	1.333	--	--	JURASSIC	--	LOWER WATROUS
0.057	2.519	13.60	12.8	50.0	1.124	885	--	MISSISSIPPIAN	--	MIDALE
0.055	0.907	9.13	11.3	35.0	1.333	869	--	MISSISSIPPIAN	--	RATCLIFFE
0.040	0.032	13.00	7.4	40.0	1.111	--	--	MISSISSIPPIAN	--	SOURIS VALLEY
TOTAL AREA IV MEDIUM										
AREA IV - LIGHT										
0.068	0.680	2.53	16.3	42.8	1.376	823	1 347	MISSISSIPPIAN	1956	ALAMEDA MIDALE (CENTRAL UNIT)
0.074	2.363	2.77	17.2	40.8	1.376	826	--	--	--	MIDALE (EAST UNIT)
0.069	0.421	3.44	16.6	42.7	1.376	--	--	--	--	MIDALE (NORTH UNIT)
0.059	0.906	3.35	14.5	45.0	1.351	--	--	--	--	MIDALE (SOUTH UNIT)
0.046	1.405	4.30	11.0	42.0	1.376	842	--	--	--	MIDALE (NON-UNIT)
0.054	0.032	8.80	11.0	35.0	1.333	844	1 381	MISSISSIPPIAN	1982	ALAMEDA WEST FROBISHER
0.048	0.181	8.94	11.7	45.0	1.351	843	1 356	MISSISSIPPIAN	--	ALAMEDA WEST MIDALE (VOLUNTARY UNIT NO.1)
0.048	0.032	8.00	11.7	45.0	1.351	--	--	--	--	MIDALE (NON-UNIT)
0.087	1.619	7.99	16.5	30.0	1.333	824	1 122	MISSISSIPPIAN	1954	ALIDA EAST ALIDA (UNIT)
0.081	0.049	7.92	16.7	35.0	1.333	--	--	--	--	ALIDA (NON-UNIT)
0.074	0.955	9.75	14.3	31.0	1.333	836	1 143	MISSISSIPPIAN	1955	ALIDA WEST ALIDA

POOL	PRODUCING HORIZON	INITIAL OIL	ESTIMATED RECOVERY		INITIAL RESERVES			CUMULATIVE	1984 PRODUCTION	YEARLY	DAILY	
		IN PLACE	PRIMARY	ENHANCED	TOTAL	PRIMARY	ENHANCED	PRODUCTION	REMAINING			TOTAL
		3 M x 1 000 000		PER CENT			3 -----M x 1 000 000-----	Dec. 31/84	RESERVES	3 M x 1 000	3 M / DAY	
ARCOLA												
	FROBISHER-ALIDA	6.110	19.90	0.00	19.90	1.216	0.000	1.216	0.873	0.343	30.762	103.9
BIEFAIT												
	MIDALE BEDS	2.252	16.70	0.00	16.70	0.376	0.000	0.376	0.092	0.284	32.655	88.7
BROWNING												
	FROBISHER-ALIDA	6.391	17.00	0.00	17.00	1.086	0.000	1.086	0.788	0.298	27.342	74.4
CANTAL												
	FROBISHER-ALIDA (VOL UNIT NO. 1)	0.185	38.00	0.00	38.00	0.070	0.000	0.070	0.046	0.024	2.950	7.0
	FROBISHER-ALIDA (NON-UNIT)	2.134	41.00	0.00	41.00	0.875	0.000	0.875	0.740	0.135	15.462	45.2
CARNDUFF												
	FROBISHER	3.293	20.00	0.00	20.00	0.659	0.000	0.659	0.498	0.161	13.022	40.3
CARNDUFF												
	MIDALE (EAST UNIT)	7.579	15.60	22.10	37.70	1.182	1.675	2.857	2.621	0.236	33.939	101.3
	MIDALE (WEST UNIT)	3.435	13.00	29.50	42.50	0.447	1.013	1.460	1.396	0.064	12.450	31.8
	MIDALE (VOLUNTARY UNIT NO. 1)	0.420	5.20	10.60	15.80	0.022	0.045	0.067	0.047	0.020	2.086	4.4
	MIDALE (NON-UNIT)	2.012	13.80	3.00	16.80	0.278	0.060	0.338	0.206	0.132	13.427	50.3
CLARILAW												
	FROBISHER-ALIDA (KISBEY VOL UNIT)	0.521	22.50	0.00	22.50	0.117	0.000	0.117	0.087	0.030	4.031	11.3
	FROBISHER-ALIDA (NON-UNIT)	0.592	22.50	0.00	22.50	0.133	0.000	0.133	0.088	0.045	6.411	17.2
CRYSTAL HILL												
	SOURIS VALLEY	0.997	7.80	0.00	7.80	0.078	0.000	0.078	0.067	0.011	2.142	5.5
DALESBORO												
	FROBISHER-ALIDA	0.173	18.00	0.00	18.00	0.031	0.000	0.031	0.026	0.005	0.770	2.2
EAST PINTO												
	FROBISHER	0.024	5.00	0.00	5.00	0.001	0.000	0.001	0.000	0.001	0.000	0.0
EAST PINTO												
	MIDALE	0.046	10.00	0.00	10.00	0.005	0.000	0.005	0.003	0.002	0.422	1.3
EDENVALE												
	TILSTON	1.444	7.00	0.00	7.00	0.101	0.000	0.101	0.064	0.037	4.428	16.0
ELMORE												
	FROBISHER (VOLUNTARY UNIT)	4.966	28.00	13.80	41.80	1.390	0.685	2.075	1.647	0.428	45.515	121.5
	FROBISHER (NON-UNIT)	0.709	6.50	0.00	6.50	0.046	0.000	0.046	0.019	0.027	3.244	7.3
ELMORE												
	MIDALE	0.292	24.00	0.00	24.00	0.070	0.000	0.070	0.062	0.008	1.532	4.3
FERTILE												
	TILSTON	0.439	5.70	0.00	5.70	0.025	0.000	0.025	0.006	0.019	3.730	8.2
FLAT LAKE												
	RATCLIFFE (VOLUNTARY UNIT NO. 1)	8.181	10.00	16.70	26.70	0.818	1.366	2.184	1.451	0.733	64.435	169.3
	RATCLIFFE (NON-UNIT)	1.126	2.60	0.00	2.60	0.029	0.000	0.029	0.004	0.025	2.374	8.7
FLORENCE												
	FROBISHER	0.568	19.90	0.00	19.90	0.113	0.000	0.113	0.107	0.006	1.841	4.5
FREDA LAKE												
	RATCLIFFE	6.981	11.00	0.00	11.00	0.768	0.000	0.768	0.408	0.360	36.250	94.7
FRYS												
	TILSTON-SOURIS VALLEY	2.887	5.20	0.00	5.20	0.150	0.000	0.150	0.095	0.055	7.005	21.0
GAINSBOROUGH												
	FROBISHER-ALIDA (VOL UNIT)	1.090	10.00	2.80	12.80	0.109	0.031	0.140	0.125	0.015	2.920	7.3
	FROBISHER-ALIDA (NON-UNIT)	2.207	6.30	0.00	6.30	0.139	0.000	0.139	0.103	0.036	7.446	19.6
GLEN EWEN												
	FROBISHER	0.982	17.50	0.00	17.50	0.172	0.000	0.172	0.124	0.048	5.776	15.8
GLEN EWEN												
	MIDALE (UNIT)	5.989	11.00	7.20	18.20	0.659	0.431	1.090	0.976	0.114	14.266	41.0
	MIDALE (NON-UNIT)	0.315	3.00	0.00	3.00	0.009	0.000	0.009	0.002	0.007	0.749	2.9
HASTINGS												
	FROBISHER (UNIT)	2.381	28.60	2.40	31.00	0.681	0.057	0.738	0.672	0.066	9.024	23.1
	FROBISHER (VOL UNIT NO. 1)	4.702	17.00	7.70	24.70	0.799	0.362	1.161	1.026	0.135	20.513	55.6
	FROBISHER (VOL UNIT NO. 2)	5.732	11.00	2.80	13.80	0.631	0.160	0.791	0.759	0.032	7.805	20.2
	FROBISHER (NON-UNIT)	11.096	18.00	0.00	18.00	1.997	0.000	1.997	1.611	0.386	42.925	140.1

INITIAL OIL IN PLACE M3/M3	AREA HA X1 000	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	WATER SATURATION PER CENT	FORMATION VOLUME FACTOR	DENSITY OF OIL KG/M3	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL	PRODUCING HORIZON
0.080	1.376	5.58	15.5	35.0	1.266	854	1 199	MISSISSIPPIAN	1964	ARCOLA	FROBISHER-ALIDA
0.044	0.291	17.50	8.0	35.0	1.176	852	1 589	MISSISSIPPIAN	1980	BIENFAIT	MIDALE BEDS
0.063	1.408	7.16	13.0	35.0	1.333	853	1 280	MISSISSIPPIAN	1957	BROWNING	FROBISHER-ALIDA
0.032	0.097	5.91	6.9	35.0	1.393	823	1 196	MISSISSIPPIAN	1956	CANTAL	FROBISHER-ALIDA (VOL UNIT NO. 1)
0.047	0.858	5.33	10.0	35.0	1.393	834	--	--	--		FROBISHER-ALIDA (NON-UNIT)
0.071	1.019	4.57	14.5	35.0	1.333	854	1 298	MISSISSIPPIAN	1956	CARNDUFF	FROBISHER
0.076	5.568	1.80	14.4	30.0	1.333	844	1 280	MISSISSIPPIAN	1955	CARNDUFF	MIDALE (EAST UNIT)
0.068	2.104	2.41	12.9	30.0	1.333	844	--	--	--		MIDALE (WEST UNIT)
0.062	0.214	3.14	11.9	30.0	1.333	--	--	--	--		MIDALE (VOLUNTARY UNIT NO. 1)
0.072	1.305	2.13	14.4	33.0	1.333	835	--	--	--		MIDALE (NON-UNIT)
0.059	0.162	5.43	11.4	35.0	1.250	843	1 234	MISSISSIPPIAN	1963	CLARILAW	FROBISHER-ALIDA (KISBEY VOL UNIT)
0.057	0.243	4.27	11.7	35.0	1.333	858	--	--	--		FROBISHER-ALIDA (NON-UNIT)
0.059	0.324	5.18	11.0	40.0	1.111	861	1 113	MISSISSIPPIAN	1966	CRYSTAL HILL	SOURIS VALLEY
0.055	0.065	4.88	11.2	35.0	1.333	853	1 261	MISSISSIPPIAN	1966	DALESBORO	FROBISHER-ALIDA
0.045	0.032	1.68	9.2	35.0	1.333	--	1 542	MISSISSIPPIAN	1974	EAST PINTO	FROBISHER
0.043	0.032	3.35	10.4	45.0	1.333	--	1 538	MISSISSIPPIAN	1974	EAST PINTO	MIDALE
0.075	0.323	6.00	13.8	40.0	1.111	853	1 125	MISSISSIPPIAN	1963	EDENVALE	TILSTON
0.081	0.879	7.01	15.9	41.1	1.162	871	1 219	MISSISSIPPIAN	1961	ELMORE	FROBISHER (VOLUNTARY UNIT)
0.039	0.210	8.59	8.3	45.0	1.162	875	--	--	--		FROBISHER (NON-UNIT)
0.056	0.194	2.71	11.4	35.0	1.333	841	1 204	MISSISSIPPIAN	1961	ELMORE	MIDALE
0.079	0.081	6.87	14.6	40.0	1.111	860	953	MISSISSIPPIAN	1983	FERTILE	TILSTON
0.060	2.428	5.64	14.1	49.2	1.199	865	1 956	MISSISSIPPIAN	1965	FLAT LAKE	RATCLIFFE (VOLUNTARY UNIT NO. 1)
0.051	0.259	8.53	9.8	35.0	1.250	848	--	--	--		RATCLIFFE (NON-UNIT)
0.062	0.259	3.54	12.7	35.0	1.333	843	1 290	MISSISSIPPIAN	1965	FLORENCE	FROBISHER
0.112	2.137	2.92	22.7	45.0	1.116	870	1 694	MISSISSIPPIAN	1967	FREDA LAKE	RATCLIFFE
0.074	0.291	13.41	13.7	40.0	1.111	846	974	MISSISSIPPIAN	1958	FRYS	TILSTON-SOURIS VALLEY
0.070	0.243	6.40	11.5	30.0	1.149	858	1 072	MISSISSIPPIAN	1956	GAINSBOROUGH	FROBISHER-ALIDA (VOL UNIT)
0.080	0.421	6.52	13.2	30.0	1.149	865	--	--	--		FROBISHER-ALIDA (NON-UNIT)
0.049	0.356	5.60	10.1	35.0	1.333	818	1 304	MISSISSIPPIAN	1954	GLEN EWEN	FROBISHER
0.067	4.209	2.13	13.7	35.0	1.333	828	1 280	MISSISSIPPIAN	1954	GLEN EWEN	MIDALE (UNIT)
0.068	0.065	7.10	14.0	35.0	1.333	826	--	--	--		MIDALE (NON-UNIT)
0.073	0.502	6.49	14.8	37.0	1.276	833	1 200	MISSISSIPPIAN	1955	HASTINGS	FROBISHER (UNIT)
0.067	1.105	6.37	13.7	35.0	1.333	--	--	--	--		FROBISHER (VOL UNIT NO. 1)
0.097	0.971	6.10	19.6	37.0	1.276	843	--	--	--		FROBISHER (VOL UNIT NO. 2)
0.049	2.023	11.18	10.9	40.0	1.333	842	--	--	--		FROBISHER (NON-UNIT)

POOL	INITIAL OIL IN PLACE 3 M x1 000 000	ESTIMATED RECOVERY PRIMARY ENHANCED TOTAL PER CENT	INITIAL RESERVES PRIMARY ENHANCED TOTAL 3 M x 1 000 000	CUMULATIVE PRODUCTION Dec. 31/84	REMAINING RESERVES	1984 YEARLY TOTAL 3 M x1 000	PRODUCTION DAILY AVERAGE 3 M /DAY
PRODUCING HORIZON							
HASTINGS EAST							
FROBISHER	2.460	12.40 0.00 12.40	0.305 0.000 0.305	0.127	0.178	24.940	64.5
HAZELWOOD							
TILSTON	1.206	12.40 0.00 12.40	0.150 0.000 0.150	0.145	0.005	3.561	9.3
HOFFER							
RATCLIFFE LOWER POOL	0.894	9.20 0.00 9.20	0.082 0.000 0.082	0.054	0.028	3.300	7.7
HOFFER							
RATCLIFFE UPPER POOL	1.459	6.90 0.00 6.90	0.101 0.000 0.101	0.049	0.052	5.595	18.7
HUMMINGBIRD							
BIRDBEAR (VOLUNTARY UNIT NO. 1)	1.171	40.50 0.00 40.50	0.474 0.000 0.474	0.425	0.049	9.315	27.0
INGOLDSBY							
FROBISHER-ALIDA (VOL UNIT)	8.312	37.00 0.00 37.00	3.075 0.000 3.075	2.148	0.927	33.288	90.1
FROBISHER-ALIDA (NON-UNIT)	0.645	36.80 0.00 36.80	0.237 0.000 0.237	0.069	0.168	6.409	39.1
KENOSSEE							
TILSTON (VOLUNTARY UNIT)	4.044	57.70 0.00 57.70	2.333 0.000 2.333	1.787	0.546	61.901	165.3
KISBEY							
BIRDBEAR	1.560	11.50 0.00 11.50	0.179 0.000 0.179	0.112	0.067	10.025	36.6
LIGHTNING							
TILSTON	0.488	10.60 0.00 10.60	0.052 0.000 0.052	0.040	0.012	0.611	4.9
MOOSE MOUNTAIN							
TILSTON	2.662	20.50 0.00 20.50	0.546 0.000 0.546	0.444	0.102	22.061	66.6
MORRISVIEW							
FROBISHER-ALIDA	0.986	20.00 0.00 20.00	0.197 0.000 0.197	0.165	0.032	4.531	11.0
NORTH ANTLER							
MIDALE (VOLUNTARY UNIT NO. 1)	0.757	8.00 5.20 13.20	0.061 0.039 0.100	0.095	0.005	1.296	3.2
NORTHGATE							
FROBISHER	0.221	19.40 0.00 19.40	0.043 0.000 0.043	0.041	0.002	0.360	1.1
NORTHGATE							
MIDALE (VOLUNTARY UNIT)	3.092	9.00 1.80 10.80	0.278 0.056 0.334	0.242	0.092	4.985	15.8
MIDALE (NON UNIT)	0.023	26.00 0.00 26.00	0.006 0.000 0.006	0.005	0.001	0.580	1.4
NOTTINGHAM							
ALIDA (NORTH ALIDA BEDS UNIT)	9.409	19.90 0.00 19.90	1.872 0.000 1.872	1.408	0.464	28.705	80.1
ALIDA (NON-UNIT)	3.525	25.00 0.00 25.00	0.881 0.000 0.881	0.780	0.101	12.711	35.0
OAKLEY							
FROBISHER	0.705	15.50 0.00 15.50	0.109 0.000 0.109	0.103	0.006	1.292	3.8
PARKMAN							
SOURIS VALLEY	1.374	13.00 0.00 13.00	0.179 0.000 0.179	0.143	0.036	10.508	26.3
PARKMAN							
TILSTON	1.051	13.20 0.00 13.20	0.139 0.000 0.139	0.106	0.033	4.877	19.8
PARKMAN							
TILSTON-SOURIS VALLEY	24.131	15.70 0.00 15.70	3.789 0.000 3.789	2.920	0.869	100.883	376.8
PARKMAN SOUTH							
TILSTON-SOURIS VALLEY	1.675	12.00 0.00 12.00	0.201 0.000 0.201	0.104	0.097	4.640	13.6
PINTO							
FROBISHER	1.995	20.50 0.00 20.50	0.409 0.000 0.409	0.372	0.037	11.584	40.3
PINTO							
MIDALE (SOUTH PINTO UNIT)	5.628	10.40 2.00 12.40	0.585 0.113 0.698	0.571	0.127	11.705	33.9
MIDALE (NON-UNIT)	5.737	9.00 0.00 9.00	0.516 0.000 0.516	0.453	0.063	11.133	43.7
QUEENSDALE EAST							
FROBISHER-ALIDA (NORTH CANTAL UNIT)	1.710	60.00 0.00 60.00	1.026 0.000 1.026	0.898	0.128	9.028	25.3
FROBISHER-ALIDA (NON-UNIT)	11.656	47.20 0.00 47.20	5.502 0.000 5.502	3.993	1.509	128.733	417.3
QUEENSDALE NORTH							
ALIDA	0.815	31.70 0.00 31.70	0.258 0.000 0.258	0.205	0.053	4.860	25.6
QUEENSDALE WEST							
ALIDA	1.761	47.10 0.00 47.10	0.829 0.000 0.829	0.685	0.144	12.653	33.3
ROCANVILLE							
BAKKEN SAND	0.951	37.00 0.00 37.00	0.352 0.000 0.352	0.275	0.077	8.266	25.6
ROWCOTT							
BAKKEN SAND	1.058	10.00 0.00 10.00	0.106 0.000 0.106	0.096	0.010	1.842	4.1

INITIAL OIL IN PLACE M3/M3	AREA HA X1 000	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	WATER SATURATION PER CENT	FORMATION VOLUME FACTOR	DENSITY OF OIL KG/M3	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL PRODUCING HORIZON
0.039	0.696	8.95	8.1	35.0	1.333	837	1 147	MISSISSIPPIAN	1956	HASTINGS EAST FROBISHER
0.073	0.162	10.21	13.5	40.0	1.111	848	1 149	MISSISSIPPIAN	1963	HAZELWOOD TILSTON
0.066	0.130	10.41	12.7	35.0	1.250	880	1 935	MISSISSIPPIAN	1964	HOFFER RATCLIFFE LOWER POOL
0.063	0.484	4.79	12.1	35.0	1.250	876	1 927	MISSISSIPPIAN	1964	HOFFER RATCLIFFE UPPER POOL
0.062	0.209	9.05	10.3	28.7	1.186	830	2 326	DEVONIAN	1966	HUMMINGBIRD BIRDBEAR (VOLUNTARY UNIT NO. 1)
0.079	1.214	8.69	13.0	30.0	1.155	865	1 089	MISSISSIPPIAN	1955	INGOLDSBY FROBISHER-ALIDA (VOL UNIT)
0.047	0.291	4.75	7.7	30.0	1.155	850	--	--	--	FROBISHER-ALIDA (NON-UNIT)
0.083	0.996	4.88	16.0	35.0	1.250	848	1 196	MISSISSIPPIAN	1958	KENOSSEE TILSTON (VOLUNTARY UNIT)
0.076	0.243	8.46	12.0	25.0	1.186	845	1 626	DEVONIAN	1968	KISBEY BIRDBEAR
0.076	0.210	3.05	14.1	40.0	1.111	843	1 057	MISSISSIPPIAN	1957	LIGHTNING TILSTON
0.072	0.599	6.20	12.9	40.0	1.080	864	1 188	MISSISSIPPIAN	1960	MOOSE MOUNTAIN TILSTON
0.071	0.307	4.54	13.6	35.0	1.250	843	1 266	MISSISSIPPIAN	1967	MORRISVIEW FROBISHER-ALIDA
0.059	0.233	5.46	12.2	35.0	1.333	827	1 152	MISSISSIPPIAN	1965	NORTH ANTLER MIDALE (VOLUNTARY UNIT NO. 1)
0.025	0.129	6.89	5.1	35.0	1.333	843	1 585	MISSISSIPPIAN	1963	NORTHGATE FROBISHER
0.044	1.456	4.84	15.6	57.0	1.529		1 575	MISSISSIPPIAN		NORTHGATE MIDALE (VOLUNTARY UNIT)
0.037	0.016	3.84	14.3	60.0	1.531	837	--	MISSISSIPPIAN	1963	MIDALE (NON UNIT)
0.087	1.182	9.14	16.9	31.2	1.335	839	1 066	MISSISSIPPIAN	1956	NOTTINGHAM ALIDA (NORTH ALIDA BEDS UNIT)
0.080	0.680	6.49	15.5	31.2	1.335	846	--	--	--	ALIDA (NON-UNIT)
0.049	0.259	5.55	10.9	40.0	1.333	841	1 196	MISSISSIPPIAN	1955	OAKLEY FROBISHER
0.040	0.682	5.03	8.9	50.0	1.111	871	1 188	MISSISSIPPIAN	1964	PARKMAN SOURIS VALLEY
0.058	0.291	6.19	10.8	40.0	1.111	870	1 060	MISSISSIPPIAN	1958	PARKMAN TILSTON
0.058	2.565	16.13	10.8	40.0	1.111	862	1 097	MISSISSIPPIAN	1959	PARKMAN TILSTON-SOURIS VALLEY
0.082	0.162	12.68	15.1	40.0	1.111	841	1 095	MISSISSIPPIAN	1969	PARKMAN SOUTH TILSTON-SOURIS VALLEY
0.046	1.004	4.30	11.2	45.0	1.333	848	1 631	MISSISSIPPIAN	1957	PINTO FROBISHER
0.053	2.525	4.24	14.5	45.0	1.517	873	1 615	MISSISSIPPIAN	1957	PINTO MIDALE (SOUTH PINTO UNIT)
0.053	2.574	4.24	14.5	45.0	1.517	834	--	--	--	MIDALE (NON-UNIT)
0.040	0.437	9.75	7.3	35.0	1.182	843	1 173	MISSISSIPPIAN	1956	QUEENSDALE EAST FROBISHER-ALIDA (NORTH CANTAL UNIT)
0.064	2.700	6.71	11.7	35.0	1.182	850	--	--	--	FROBISHER-ALIDA (NON-UNIT)
0.079	0.210	4.88	16.3	35.0	1.333	851	1 173	MISSISSIPPIAN	1959	QUEENSDALE NORTH ALIDA
0.055	0.324	9.95	11.2	35.0	1.333	859	1 204	MISSISSIPPIAN	1956	QUEENSDALE WEST ALIDA
0.092	0.227	4.57	18.8	35.0	1.333	843	715	MISSISSIPPIAN	1957	ROCANVILLE BAKKEN SAND
0.099	0.356	2.99	14.1	25.0	1.064	823	1 822	MISSISSIPPIAN	1956	RONCOTT BAKKEN SAND

POOL	PRODUCING HORIZON	INITIAL OIL	ESTIMATED RECOVERY			INITIAL RESERVES			CUMULATIVE	REMAINING	1984 PRODUCTION	
		IN PLACE	PRIMARY	ENHANCED	TOTAL	PRIMARY	ENHANCED	TOTAL	PRODUCTION	RESERVES	YEARLY	DAILY
		3						3	Dec. 31/84		TOTAL	AVERAGE
		M x 1 000 000		PER CENT				M x 1 000 000			M x 1 000	M / DAY
ROSEBANK												
	FROBISHER-ALIDA (VOL UNIT NO. 1)	8.680	46.40	0.00	46.40	4.028	0.000	4.028	3.494	0.574	37.760	105.8
	ALIDA (NON-UNIT)	8.028	16.30	0.00	16.30	1.309	0.000	1.309	0.939	0.370	30.365	82.1
ROSEBANK SOUTH												
	ALIDA	1.553	11.20	0.00	11.20	0.174	0.000	0.174	0.108	0.066	8.784	19.8
SHERWOOD												
	FROBISHER	3.506	55.20	0.00	55.20	1.935	0.000	1.935	1.614	0.321	35.175	91.8
SILVERTON												
	FROBISHER	0.597	14.00	0.00	14.00	0.084	0.000	0.084	0.073	0.011	1.703	4.3
SKINNER LAKE												
	RATCLIFFE	5.367	7.30	0.00	7.30	0.392	0.000	0.392	0.211	0.181	15.605	45.0
SOURIS FLAT												
	FROBISHER	2.817	23.50	0.00	23.50	0.662	0.000	0.662	0.550	0.112	14.812	39.4
SOUTH FLETWODE												
	TILSTON	1.562	29.80	0.00	29.80	0.465	0.000	0.465	0.402	0.063	11.377	31.8
STAR VALLEY												
	FROBISHER-ALIDA	4.365	49.50	0.00	49.50	2.161	0.000	2.161	1.132	1.029	74.923	222.7
STEELMAN												
	FROBISHER (VOL UNIT NO. 1)	0.903	29.50	0.00	29.50	0.266	0.000	0.266	0.250	0.016	3.542	9.0
	FROBISHER (DOUGLSTON UNIT)	0.852	26.20	0.00	26.20	0.223	0.000	0.223	0.195	0.028	3.321	8.8
	FROBISHER (NON-UNIT)	6.669	23.60	0.00	23.60	1.574	0.000	1.574	1.505	0.069	18.977	45.6
STEELMAN												
	MIDALE (UNIT IA)	18.404	16.00	32.20	48.20	2.945	5.926	8.871	8.111	0.760	110.417	289.5
	MIDALE (UNIT II)	16.561	23.10	27.30	50.40	3.826	4.521	8.347	7.564	0.783	99.052	274.8
	MIDALE (UNIT III)	11.451	16.00	22.60	38.60	1.832	2.588	4.420	3.899	0.521	63.575	170.5
	MIDALE (UNIT IV)	13.324	15.00	26.20	41.20	1.999	3.491	5.490	4.650	0.840	100.545	265.6
	MIDALE (UNIT V)	6.440	15.00	11.70	26.70	0.966	0.753	1.719	1.587	0.132	18.214	43.2
	MIDALE (UNIT VI)	24.826	16.20	21.00	37.20	4.022	5.213	9.235	8.628	0.607	85.436	245.4
	MIDALE (UNIT VII)	2.549	10.40	22.10	32.50	0.265	0.563	0.828	0.721	0.107	13.988	38.2
	MIDALE (DOUGLSTON UNIT)	1.943	12.30	14.50	26.80	0.239	0.282	0.521	0.411	0.110	11.736	30.9
	MIDALE (LAMPHAN UNIT)	0.934	13.00	13.00	26.00	0.121	0.121	0.242	0.215	0.027	3.942	9.9
	MIDALE (NORTH UNIT)	1.963	15.00	18.40	33.40	0.294	0.361	0.655	0.123	0.532	24.862	45.3
	MIDALE (NON-UNIT)	6.608	13.10	0.00	13.10	0.866	0.000	0.866	0.582	0.284	44.215	105.4
STORTHOAKS												
	ALIDA-TILSTON	3.487	21.20	0.00	21.20	0.739	0.000	0.739	0.607	0.132	14.772	32.9
VIEWFIELD												
	FROBISHER (VOLUNTARY UNIT NO. 1)	1.843	11.00	0.00	11.00	0.203	0.000	0.203	0.135	0.068	16.488	49.8
	FROBISHER (NON-UNIT)	6.252	14.50	0.00	14.50	0.907	0.000	0.907	0.442	0.465	30.124	84.2
WARMLEY												
	ALIDA (FLETWODE ALIDA VOL UNIT)	0.538	31.60	0.00	31.60	0.170	0.000	0.170	0.126	0.044	5.094	13.7
WAUCHOPE												
	ALIDA-TILSTON	3.719	8.00	0.00	8.00	0.298	0.000	0.298	0.026	0.272	20.419	93.6
WHITE BEAR												
	TILSTON	2.750	41.20	0.00	41.20	1.133	0.000	1.133	0.891	0.242	24.060	62.3
WHITE BEAR												
	TILSTON-SOURIS VALLEY	0.473	16.50	0.00	16.50	0.078	0.000	0.078	0.075	0.003	1.095	3.5
WILDMOOD												
	ALIDA	1.253	12.00	0.00	12.00	0.150	0.000	0.150	0.120	0.030	5.691	12.3
WILLMAR												
	FROBISHER-ALIDA (VOL UNIT NO. 1)	3.560	17.00	15.70	32.70	0.605	0.559	1.164	0.869	0.295	23.208	56.2
	FROBISHER-ALIDA (N CENTRAL VOL UNIT)	1.216	14.00	8.00	22.00	0.170	0.097	0.267	0.207	0.060	5.069	12.6
	FROBISHER-ALIDA (N DALES UNIT NO. 1)	1.151	35.00	11.30	46.30	0.403	0.130	0.533	0.494	0.039	9.059	22.1
	FROBISHER-ALIDA (KISBEY SD VOL UNIT)	0.256	48.00	0.00	48.00	0.123	0.000	0.123	0.115	0.008	1.825	4.8
	FROBISHER-ALIDA (NON-UNIT)	11.276	29.50	0.50	30.00	3.326	0.056	3.382	2.693	0.689	77.769	212.8
WINMORE												
	FROBISHER	0.374	7.50	0.00	7.50	0.028	0.000	0.028	0.027	0.001	0.159	0.0
WORKMAN												
	FROBISHER (VOLUNTARY UNIT NO. 1)	5.046	16.70	19.00	35.70	0.843	0.959	1.802	1.608	0.194	25.595	72.7
	FROBISHER (NON-UNIT)	5.924	25.60	0.00	25.60	1.517	0.000	1.517	0.990	0.527	54.577	145.3

INITIAL OIL IN PLACE M3/M3	AREA HA X1 000	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	WATER SATURATION PER CENT	FORMATION VOLUME FACTOR	DENSITY OF OIL KG/M3	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL PRODUCING HORIZON
0.065	0.971	13.72	12.5	30.0	1.343	828	1 066	MISSISSIPPIAN	1955	ROSEBANK FROBISHER-ALIDA (VOL UNIT NO. 1)
0.071	0.955	11.80	15.0	37.5	1.316	841	--	--	--	ALIDA (NON-UNIT)
0.050	0.405	7.62	9.8	35.0	1.266	864	1 074	MISSISSIPPIAN	1954	ROSEBANK SOUTH ALIDA
0.088	0.511	7.77	15.8	35.0	1.163	880	1 240	MISSISSIPPIAN	1963	SHERWOOD FROBISHER
0.027	0.146	15.40	5.9	40.0	1.333	854	1 204	MISSISSIPPIAN	1956	SILVERTON FROBISHER
0.119	1.036	4.36	24.0	45.0	1.111	864	1 723	MISSISSIPPIAN	1969	SKINNER LAKE RATCLIFFE
0.065	0.712	6.10	13.3	35.0	1.333	861	1 333	MISSISSIPPIAN	1965	SOURIS FLAT FROBISHER
0.070	0.356	6.25	13.0	40.0	1.111	859	1 143	MISSISSIPPIAN	1961	SOUTH FLETMODE TILSTON
0.073	0.822	7.26	15.0	35.0	1.333	862	1 162	MISSISSIPPIAN	1960	STAR VALLEY FROBISHER-ALIDA
0.042	0.363	5.88	9.2	35.0	1.414	833	1 409	MISSISSIPPIAN	1954	STEELMAN FROBISHER (VOL UNIT NO. 1)
0.049	0.227	7.62	10.1	35.0	1.333	848	--	--	--	FROBISHER (DOUGLSTON UNIT)
0.045	2.622	5.67	9.2	35.0	1.333	849	--	--	--	FROBISHER (NON-UNIT)
0.080	5.463	4.21	17.1	35.0	1.389	843	1 399	MISSISSIPPIAN	1954	STEELMAN MIDALE (UNIT IA)
0.085	2.072	9.45	16.5	28.8	1.389	858	--	--	--	MIDALE (UNIT II)
0.088	2.833	4.57	18.9	35.0	1.389	827	--	--	--	MIDALE (UNIT III)
0.077	5.277	3.29	16.4	35.0	1.389	824	--	--	--	MIDALE (UNIT IV)
0.070	2.833	3.26	14.9	35.0	1.389	837	--	--	--	MIDALE (UNIT V)
0.073	6.685	5.12	15.5	35.0	1.389	843	--	--	--	MIDALE (UNIT VI)
0.084	0.728	4.18	17.9	35.0	1.389	870	--	--	--	MIDALE (UNIT VII)
0.059	0.826	3.99	12.6	35.0	1.389	--	--	--	--	MIDALE (DOUGLSTON UNIT)
0.092	0.437	2.32	18.6	31.2	1.389	862	--	--	--	MIDALE (LAMPHAN UNIT)
0.049	0.971	4.13	10.0	32.0	1.389	--	--	--	--	MIDALE (NORTH UNIT)
0.049	3.225	4.21	10.4	35.0	1.389	846	--	--	--	MIDALE (NON-UNIT)
0.083	0.664	6.35	14.3	35.0	1.124	842	1 066	MISSISSIPPIAN	1962	STORTHOAKS ALIDA-TILSTON
0.067	0.161	17.07	12.0	35.0	1.163	873	1 270	MISSISSIPPIAN	1969	VIEWFIELD FROBISHER (VOLUNTARY UNIT NO. 1)
0.071	0.412	21.38	12.7	35.0	1.163	838	--	--	--	FROBISHER (NON-UNIT)
0.062	0.401	2.16	11.8	40.0	1.140	860	1 242	MISSISSIPPIAN	1966	WARMLEY ALIDA (FLETMODE ALIDA VOL UNIT)
0.076	0.291	16.80	15.6	35.0	1.333	852	1 140	MISSISSIPPIAN	1980	WAUCHOPE ALIDA-TILSTON
0.066	0.453	9.14	12.3	40.0	1.111	862	1 060	MISSISSIPPIAN	1957	WHITE BEAR TILSTON
0.060	0.146	5.36	11.2	40.0	1.111	853	1 188	MISSISSIPPIAN	1963	WHITE BEAR TILSTON-SOURIS VALLEY
0.070	0.210	8.50	14.4	35.0	1.333	852	1 184	MISSISSIPPIAN	1966	WILWOOD ALIDA
0.074	0.809	5.91	12.9	26.0	1.282	843	1 249	MISSISSIPPIAN	1957	WILLMAR FROBISHER-ALIDA (VOL UNIT NO. 1)
0.060	0.324	6.25	11.0	30.0	1.282	843	--	--	--	FROBISHER-ALIDA (N CENTRAL VOL UNIT)
0.050	0.388	5.91	9.9	35.0	1.282	--	--	--	--	FROBISHER-ALIDA (N DALES UNIT NO. 1)
0.093	0.081	3.41	20.0	40.0	1.293	--	--	--	--	FROBISHER-ALIDA (KISBEY SD VOL UNIT)
0.070	2.444	6.55	12.9	30.0	1.282	861	--	--	--	FROBISHER-ALIDA (NON-UNIT)
0.052	0.227	3.17	11.0	45.0	1.163	869	1 140	MISSISSIPPIAN	1968	WINMORE FROBISHER
0.064	1.748	4.51	13.1	42.1	1.185	844	1 237	MISSISSIPPIAN	1959	WORMAN FROBISHER (VOLUNTARY UNIT NO. 1)
0.051	2.377	4.90	10.4	42.1	1.184	861	--	--	--	FROBISHER (NON-UNIT)

POOL	PRODUCING HORIZON	INITIAL OIL ESTIMATED RECOVERY				INITIAL RESERVES				CUMULATIVE PRODUCTION Dec. 31/84	REMAINING RESERVES	1984 PRODUCTION	
		IN PLACE	PRIMARY	ENHANCED	TOTAL	PRIMARY	ENHANCED	TOTAL	YEARLY			DAILY	
		3				3			3			AVERAGE	
		M x 1 000 000		PER CENT				M x 1 000 000			M x 1 000	M /DAY	
WORKMAN													
	MIDALE (VOLUNTARY UNIT NO. 1)	1.044	17.80	6.20	24.00	0.186	0.065	0.251	0.243	0.008	2.200	5.4	
	MIDALE (VOLUNTARY UNIT NO. 2)	0.836	10.60	9.70	20.30	0.089	0.081	0.170	0.156	0.014	2.245	5.9	
	MIDALE (NON-UNIT)	1.154	11.30	1.50	12.80	0.130	0.017	0.147	0.140	0.007	3.156	8.5	
MISCELLANEOUS													
	ALIDA	2.495	8.40	0.00	8.40	0.210	0.000	0.210	0.161	0.049	7.309	19.3	
	ALIDA TILSTON	0.053	1.50	0.00	1.50	0.001	0.000	0.001	0.001	0.000	0.000	0.0	
	BAKKEN	2.089	5.30	0.00	5.30	0.111	0.000	0.111	0.051	0.060	5.084	17.0	
	BIRDBEAR	0.203	18.00	0.00	18.00	0.037	0.000	0.037	0.009	0.028	0.824	12.7	
	FROBISHER	18.358	6.00	0.00	6.00	1.101	0.000	1.101	0.327	0.774	85.989	313.1	
	FROBISHER-ALIDA	3.957	11.70	0.00	11.70	0.463	0.000	0.463	0.332	0.131	23.852	72.7	
	LOWER MATROUS	0.040	12.50	0.00	12.50	0.005	0.000	0.005	0.001	0.004	0.638	2.8	
	MIDALE	3.099	8.50	0.00	8.50	0.263	0.000	0.263	0.121	0.142	24.136	74.7	
	RATCLIFFE	2.502	5.60	0.00	5.60	0.140	0.000	0.140	0.057	0.083	10.908	34.3	
	RED RIVER	0.769	8.10	0.00	8.10	0.062	0.000	0.062	0.046	0.016	2.234	8.7	
	SOURIS VALLEY	0.831	8.00	0.00	8.00	0.066	0.000	0.066	0.026	0.040	4.162	30.7	
	TILSTON	2.716	5.00	0.00	5.00	0.136	0.000	0.136	0.075	0.061	8.091	30.8	
	TILSTON-SOURIS VALLEY	0.974	5.00	0.00	5.00	0.049	0.000	0.049	0.017	0.032	4.817	20.7	
	WINNIPEGOSIS	0.090	9.00	0.00	9.00	0.008	0.000	0.008	0.005	0.003	0.000	0.0	
	YEOMENS	0.422	6.00	0.00	6.00	0.025	0.000	0.025	0.019	0.006	1.079	3.0	
TOTAL AREA IV LIGHT		473.128				90.379	33.821	124.200	100.169	24.031	2502.764	7255.6	
PROVINCIAL TOTAL		2666.791				264.896	153.994	418.890	311.115	107.775	10794.815	30494.8	

INITIAL OIL IN PLACE M3/M3	AREA HA X1 000 METRES	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	WATER SATURATION PER CENT	FORMATION VOLUME FACTOR	DENSITY OF OIL KG/M3	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL	PRODUCING HORIZON
WORKMAN											
0.081	0.671	1.92	14.8	35.0	1.187	838	1 230	MISSISSIPPIAN	1960	MIDALE	(VOLUNTARY UNIT NO. 1)
0.075	0.356	3.14	15.7	39.3	1.274	--	--	--	--	MIDALE	(VOLUNTARY UNIT NO. 2)
0.076	0.501	3.05	14.8	35.0	1.274	844	--	--	--	MIDALE	(NON-UNIT)
MISCELLANEOUS											
0.050	0.421	11.80	10.3	35.0	1.333	843	--	MISSISSIPPIAN	--	ALIDA	
0.078	0.032	2.13	15.9	35.0	1.333	843	--	MISSISSIPPIAN	--	ALIDA TILSTON	
0.090	0.453	5.11	12.8	25.0	1.064	819	--	MISSISSIPPIAN	--	BAKKEN	
0.098	0.032	6.50	15.3	25.0	1.176	838	--	DEVONIAN	--	BIRDBEAR	
0.053	3.140	11.00	10.9	35.0	1.333	843	--	MISSISSIPPIAN	--	FROBISHER	
0.059	0.808	8.30	12.1	35.0	1.333	858	--	MISSISSIPPIAN	--	FROBISHER-ALIDA	
0.084	0.032	1.50	17.0	45.0	1.111	--	--	MISSISSIPPIAN	--	LOWER MATROUS	
0.049	0.874	7.20	10.1	35.0	1.333	838	--	MISSISSIPPIAN	--	MIDALE	
0.053	0.599	7.86	10.9	35.0	1.333	--	--	MISSISSIPPIAN	--	RATCLIFFE	
0.030	0.161	15.80	6.2	35.0	1.333	853	--	ORDOVICIAN	--	RED RIVER	
0.046	0.405	4.47	10.2	50.0	1.111	858	--	MISSISSIPPIAN	--	SOURIS VALLEY	
0.080	0.518	6.56	14.8	40.0	1.111	849	--	MISSISSIPPIAN	--	TILSTON	
0.049	0.243	8.10	11.0	50.0	1.111	843	--	MISSISSIPPIAN	--	TILSTON-SOURIS VALLEY	
0.035	0.065	3.96	6.7	35.0	1.250	--	--	DEVONIAN	--	WINNIPEGOSIS	
0.045	0.065	14.33	9.3	35.0	1.333	--	--	ORDOVICIAN	--	YEOMENS	
TOTAL AREA IV LIGHT											
PROVINCIAL TOTAL											

RESERVOIR DATA

RESERVES AND

PRODUCTION-GAS



FIVE YEAR GAS SUMMARY

	1980	1981	1982	1983	1984
INITIAL ESTABLISHED RESERVES (MILLION CUBIC METRES)					
Non-Associated	59 483.6	62 488.8	66 701.8	73 224.3	84 415.1
Associated	1 633.3	1 633.3	1 633.3	1 683.5	1 683.5
Dissolved	5 756.5	5 756.5	5 756.5	5 756.5	5 972.5
PROVINCIAL TOTAL	66 873.4	69 878.2	74 091.6	80 664.3	92 071.1
REMAINING ESTABLISHED RESERVES (MILLION CUBIC METRES)					
Non-Associated	36 488.4	38 324.1	41 289.0	46 661.8	56 407.4
Associated	794.6	791.5	790.0	838.9	837.4
Dissolved	1 143.5	1 103.3	1 054.5	966.5	994.2
PROVINCIAL TOTAL	38 426.5	40 218.9	43 133.5	48 467.2	58 239.0
YEARLY PRODUCTION (MILLION CUBIC METRES)					
Non-Associated	1 133.1	1 168.8	1 202.1	1 134.1	1 445.2
Associated	4.1	3.1	1.4	1.4	1.3
Dissolved	72.9	40.3	48.8	88.0	188.3
PROVINCIAL TOTAL	1 210.1	1 212.2	1 252.3	1 223.5	1 634.8
NUMBER OF PRODUCING WELLS					
Non-Associated	755	756	769	919	1 040
Associated	4	5	6	7	7
PROVINCIAL TOTAL	759	761	775	926	1 047
AVERAGE DAILY PRODUCTION (MILLION CUBIC METRES)					
Non-Associated	3.686	3.813	3.880	3.497	3.959
Associated	0.019	0.036	0.006	0.005	0.004
Dissolved	0.200	0.110	0.133	0.241	0.516
PROVINCIAL TOTAL	3.905	3.959	4.019	3.743	4.479

TEMPERATURE BASE 15°C

PRESSURE BASE 101.325 kPa

Pool	Initial Gas in Place Million Cubic Metres	Reservoir Recovery Per Cent	Surface Losses Per Cent	Initial Established Reserves Million Cubic Metres	Cumulative Production Dec 31/84 Million Cubic Metres	Remaining Reserves Dec 31/84 Million Cubic Metres	Estimated Heating Value MAJ/M3
Producing Horizon							
NON-ASSOCIATED GAS RESERVES							
BAYHURST							
Viking Voluntary Unit	2 567.7	80	5	1 951.4	1 815.9	135.5	37.4
BAYHURST WEST							
Viking Voluntary Unit	304.7	75	5	217.1	179.2	37.9	35.6
BEACON HILL							
Mannville	4 541.7	85	5	3 667.4	1 574.0	2 093.4	35.6
BEACON HILL WEST							
Mannville Sand	1726.9	80	5	1 312.4	7.0	1305.4	35.9
BEVERLEY EAST							
Cantuar Sand Voluntary Unit	378.0	90	5	323.2	208.3	114.9	36.9
BIGSTICK							
Second White Specks	3 817.6	65	5	2 357.4	125.8	2 231.6	35.6
BROCK							
Viking Unit	765.2	78	5	567.0	554.9	12.1	36.3
BROCK EAST							
Viking Sand	310.0	35	5	103.1	10.7	92.4	34.6
BURSTALL							
Medicine Hat Sand	450.1	80	5	342.1	0.2		35.4
Milk River	235.1	65	5	145.2	0.3	484.4	35.4
Milk River-Medicine Hat					2.4		
CAVALIER							
Spinney Hill Sand	120.0	80	5	91.2	64.2	27.0	32.4
COLEVILLE-SMILEY							
Viking Unit	6 465.7	85	5	5 221.1	4 844.5	376.6	38.4
Viking Non-Unit	58.4	80	5	44.4	31.1	13.3	38.3
DOOSLAND NORTH							
Viking Unit	843.4	80	5	640.7	428.9	211.8	40.7
Viking Non-Unit	2 787.5	65	5	1 721.3	58.9	1 662.4	40.7
FORT PITT							
Mannville Sand	1 187.7	80	5	902.7	20.4	882.3	35.9
FORT PITT NORTH							
Mannville Sand	262.9	80	5	199.8	45.9	153.9	37.0
GLIDCEN							
Viking Voluntary Unit #1	484.0	50	5	229.9	73.9	156.0	35.8
GREENAN							
Viking Sand	1 347.9	35	5	448.2	296.6	151.6	35.2
GULL LAKE							
Cantuar Sand	999.9	70	5	664.9	480.1	184.8	38.4
HATTON							
Medicine Hat Sand (Unit)	6 871.3	80	5	5 222.2	3 937.7	1 284.5	35.4
Medicine Hat Sand (Agreement Area)	1 969.2	80	5	1 496.6	661.9	834.7	35.4
Medicine Hat Sand (Non-Unit)	6 085.4	80	5	4 624.9	1 688.2		
HATTON							
Milk River	35 157.2	65	5	21 709.6	3 099.0	20 750.2	35.4
Milk River - Medicine Hat	-	-	-	-	797.1		
HOOSIER							
Viking Sand (Unit)	4 643.4	75	5	3 308.4	2 334.8	973.6	37.3
Viking Sand (Voluntary Unit #4)	134.8	75	5	96.1	21.0	76.1	39.2
Viking Sand (Non-Unit)	51.3	75	5	36.6	-	36.6	37.3

1984 PRODUCTION										POOL PRODUCING HORIZON
YEARLY TOTAL MILLION CUBIC METRES	DAILY AVERAGE MILLION CUBIC METRES/DAY	DEVELOPED AREA HECTARES	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	AVERAGE CONNATE WATER PER CENT	SPECIFIC GRAVITY	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	
NON-ASSOCIATED GAS RESERVES										
BAYHURST										
55.989	0.368	8 903	2.71	25.0	35.0	0.580	661	Cretaceous	1958	Viking Sand (Voluntary Unit)
BAYHURST WEST										
6.001	0.016	1 333	1.62	30.5	35.0	0.580	696	Cretaceous	1968	Viking Sand (Voluntary Unit)
BEACON HILL										
15.449	0.102	21 107	4.66	35.0	40.0	0.568	274	Cretaceous	1963	Mannville Sand
BEACON HILL WEST										
6.974	0.225	2 849	5.44	35.0	40.0	0.573	310	Cretaceous	1978	Mannville Sand
BEVERLEY EAST										
9.073	0.025	874	2.53	28.1	33.0	0.583	972	Cretaceous	1965	Cantuar Sand (Vol. Unit No. 1)
BIGSTICK										
86.980	0.238	9 583	4.3	20.4	30.0	0.580	692	Cretaceous	1980	Second White Specks
BROCK										
4.175	0.011	5 698	2.19	14.5	40.0	0.588	716	Cretaceous	1951	Viking Sand (Unit)
BROCK EAST										
0.490	0.001	3 108	0.91	24.0	40.0	0.597	720	Cretaceous	1967	Viking Sand
BURSTALL										
0.229	0.007	2 719.5	2.80	16.0	20.0	0.575	520	Cretaceous	1952	Medicine Hat
0.283	0.009	2 719.5	2.61	16.0	45.0	0.574	460	Cretaceous		Milk River
2.324	0.075									Milk River-Medicine Hat
CAVALIER										
20.541	0.056	1 518	1.22	25.0	30.0	0.620	400	Cretaceous	1972	Spinney Hill Sand
COLEVILLE-SMILEY										
76.475	0.210	19 779	2.99	22.5	32.0	0.600	686	Cretaceous	1951	Viking Sand (Unit)
1.155	0.003	226	2.44	25.5	32.0	0.608	--	--	--	Viking Sand (Non-Unit)
DODSLAND NORTH										
15.352	0.042	4 452	2.01	22.4	35.0	0.615	669	Cretaceous	1953	Viking Sand (Unit)
15.706	0.043	16 599	1.78	22.4	35.0	0.621	--	--	--	Viking Sand (Non-Unit)
FORT PITT										
11.327	0.031	4 890	4.17	34.0	40.0	0.578	388	Cretaceous	1972	Mannville Sand
FORT PITT NORTH										
36.510	0.106	1 457	3.02	34.0	40.0	0.568	473	Cretaceous	1971	Mannville Sand
GLIDDEN										
0.518	0.001	5 893	0.88	21.0	40.0	0.584	694	Cretaceous	1953	Viking Sand (Voluntary Unit)
GREENAN										
10.294	0.028	5 952	1.98	24.6	35.0	0.596	655	Cretaceous	1969	Viking Sand
GULL LAKE										
0.983	0.003	2 011	3.14	23.0	30.0	0.598	1 057	Cretaceous	1957	Cantuar Sand
HATTON										
94.362	0.259	43 491	3.26	21.0	50.0	0.575	477	Cretaceous	1953	Medicine Hat Sand (Unit)
21.651	0.059	13 727	2.96	21.0	50.0	0.575	--	--	--	Medicine Hat Sand (Agreement Area)
73.972	0.203	51 953	1.75	21.0	50.0	0.575	--	--	--	Medicine Hat Sand (Non Unit)
HATTON										
316.141	0.864	159 440	6.77	16.0	45.0	0.574	335	Cretaceous	--	Milk River
240.962	0.653	--	--	--	--	--	--	--	--	Milk River - Medicine Hat
HOOSIER										
28.723	0.079	12 468	3.32	23.0	32.0	0.600	732	Cretaceous	1953	Viking Sand (Unit)
0	0	697	2.56	23.0	32.0	0.604	--	--	--	Viking Sand (Vol. Unit No. 4)
0	0	129	3.81	23.0	32.0	0.600	--	--	--	Viking Sand (Non Unit)

Pool	TEMPERATURE BASE 15°C						
	PRESSURE BASE 101.325 kPa						
Producing Horizon	Initial Gas in Place Million Cubic Metres	Reservoir Recovery Per Cent	Surface Losses Per Cent	Initial Established Reserves Million Cubic Metres	Cumulative Production Dec 31/84 Million Cubic Metres	Remaining Reserves Dec 31/84 Million Cubic Metres	Estimated Heating Value MAJ/M3
LIEBENTHAL							
Milk River	492.4	65	5	304.1	117.9	186.2	35.4
LLOYDMINSTER							
Colony Sand	246.2	95	5	222.2	217.9	4.3	34.4
MARENGO							
Viking Sand	323.7	8	5	246.0	0.6	245.4	36.3
MILTON							
Viking Sand	1 047.2	85	5	845.6	787.4	58.2	37.3
PIERCELAND							
Mannville Sand	1 581.1	93	5	1 396.9	560.4	836.5	36.5
TOTNES							
Viking Sand (Voluntary Unit)	465.8	80	5	354.0	285.3	68.7	35.5
Viking Sand (Non-Unit)	155.2	80	5	118.0	1.5	116.5	35.5
UNITY FIELD							
Unity Sand	312.2	90	5	267.0	267.0	0	33.6
Viking Sand	30.2	50	5	14.4	14.4	0	37.4
WHITESIDE							
Victoria Sand (Voluntary Unit)	527.4	85	5	425.8	407.8	18.0	37.4
WHITESIDE WEST							
Viking Sand	872.4	75	5	621.6	20.2	601.4	39.1
MISCELLANEOUS							
Alida	48.9	-	-	39.5	4.8	34.7	39.9
Bakken	2 463.0	-	-	1 870.7	408.8	1 461.9	37.8
Cantuar	224.4	-	-	116.0	56.0	60.0	35.2
Colony	4 558.7	-	-	3 462.4	546.4	2 916.0	34.4
Cummings	6.3	-	-	4.8	4.8	0	36.6
Detrital	814.7	-	-	627.4	-	627.4	38.0
Lloydminster	43.6	-	-	32.3	16.5	15.8	34.4
Mannville	4 729.5	-	-	3 506.7	130.1	3 376.6	37.4
McLaren	1 191.7	-	-	904.2	499.1	405.1	34.4
Medicine Hat	4.7	-	-	4.7	0	4.7	35.4
Milk River	2 142.4	-	-	1 322.9	0	1 322.9	35.9
Rex	56.8	-	-	43.2	5.1	38.1	34.4
Ribstone Creek	75.0	-	-	51.5	0.7	50.8	34.4
Roseray	52.9	-	-	260.5	46.6	213.9	37.4
Second White Specks	5 611.5	-	-	4 145.0	11.6	4 133.4	35.4
Spinney Hill	93.5	-	-	67.7	0.4	67.3	32.0
St. Walburg	356.7	-	-	273.9	0.3	273.6	35.2
Upper Shaunavon	523.8	-	-	372.8	0.6	372.2	36.0
Viking	6 999.4	-	-	4 813.7	231.9	4 581.9	37.4
Waseca	45.7	-	-	34.7	1.8	32.9	34.2
TOTAL NON-ASSOCIATED	121 164.0			84 415.1	28 007.7	56 407.4	

1984 PRODUCTION										
YEARLY TOTAL MILLION CUBIC METRES	DAILY AVERAGE MILLION CUBIC METRES/DAY	DEVELOPED AREA HECTARES	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	AVERAGE CONNATE WATER PER CENT	SPECIFIC GRAVITY	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL PRODUCING HORIZON
										LIEBENTHAL
12.042	0.033	9 907	1.42	16.0	45.0	0.578	396	Cretaceous	1974	Milk River
										LLOYDMINSTER
0.787	0.002	1 012	4.16	25.0	30.0	0.568	518	Cretaceous	1935	Colony Sand
										WARENGO
0	0	1 410	1.89	25.0	35.0	0.576	728	Cretaceous	1954	Viking Sand
										MILTON
9.089	0.025	4 897	1.74	25.0	32.0	0.604	732	Cretaceous	1954	Viking Sand
										PIERCELAND
42.109	0.115	3 818	9.27	35.0	40.0	0.564	272	Cretaceous	1969	Mannville Sand
										TOTNES
5.095	0.014	1 554	2.71	25.0	40.0	0.584	613	Cretaceous	1969	Viking Sand (Voluntary Unit)
0.120	0.001	518	2.71	25.0	40.0	0.584	--	--	--	Viking Sand (Non Unit)
										UNITY FIELD
0	0	2 161	4.88	26.0	20.0	0.600	632	Cretaceous	1944	Unity Sand
0	0	1 042	1.52	21.6	35.0	0.600	503	Cretaceous	1945	Viking Sand
										WHITESIDE
11.680	0.032	3 885	2.74	35.0	30.0	0.568	229	Cretaceous	1962	Victoria Sand (Voluntary Unit)
										WHITESIDE WEST
6.043	0.017	3 980	2.22	22.8	32.0	0.578	724	Cretaceous	1956	Viking Sand
										MISCELLANEOUS
0	0	129	--	--	--	--	--	Mississippian	--	Alida
12.466	0.034	1 926	--	--	--	--	--	Mississippian	--	Bakken
1.234	0.003	682	--	--	--	--	--	Cretaceous	--	Cantuar
96.266	0.264	8 033	--	--	--	--	--	Cretaceous	--	Colony
2.610	0.007	32	--	--	--	--	--	Cretaceous	--	Cummings
--	--	--	--	--	--	--	--	Pre-Cretaceous	--	Detrital
5.609	0.015	131	--	--	--	--	--	Cretaceous	--	Lloydminster
1.554	0.004	2 150	--	--	--	--	--	Cretaceous	--	Mannville
62.314	0.171	4 125	--	--	--	--	--	Cretaceous	--	McLaren
0	0	--	--	--	--	--	--	Cretaceous	--	Medicine Hat
0	0	259	--	--	--	--	--	Cretaceous	--	Milk River
1.038	0.003	294	--	--	--	--	--	Cretaceous	--	Rex
0.682	0.009	--	--	--	--	--	--	Cretaceous	--	Ribstone Creek
--	--	1 708	--	--	--	--	--	Cretaceous	--	Rosera
11.594	0.097	3 367	--	--	--	--	--	Cretaceous	--	Second White Specks
0.386	0.004	--	--	--	--	--	--	Cretaceous	--	Spinney Hill
0.337	0.011	--	--	--	--	--	--	Cretaceous	--	St. Walburg
0	0	--	--	--	--	--	--	Jurassic	--	Upper Shaunavon
3.210	0.009	2 067	--	--	--	--	--	Cretaceous	--	Viking
0.643	0.002	--	--	--	--	--	--	Cretaceous	--	Waseca
1 445.200	4.589									TOTAL NON-ASSOCIATED

TEMPERATURE BASE 15°C

PRESSURE BASE 101.325 kPa

Pool	Initial Gas in Place Million Cubic Metres	Reservoir Recovery Per Cent	Surface Losses Per Cent	Initial Established Reserves Million Cubic Metres	Cumulative Production Dec 31/84 Million Cubic Metres	Remaining Reserves Dec 31/84 Million Cubic Metres	Estimated Heating Value MAJ/M3
Producing Horizon							
<u>ASSOCIATED GAS RESERVES</u>							
ABERFELDY							
Sparky Sand	125.4	80	5	95.3	62.7	32.6	34.4
ALIDA EAST							
Alida	833.4	45	5	356.3	160.7	195.6	45.0
ALIDA WEST							
Alida	81.9	85	5	66.1	--	66.1	45.0
AVON HILL							
Viking Sand	10.6	80	5	8.1	--	8.1	37.4
BUFFALO COULEE							
Bakken Sand	3.5	60	5	2.0	2.0	--	37.2
CANTUAR EAST							
Cantuar Sand	914.1	90	3	798.0	569.3	228.7	37.4
DEE VALLEY							
Waseca Sand	75.5	70	5	50.2	--	50.2	37.2
EPPING							
Sparky Sand	9.8	80	5	7.4	2.6	4.8	34.4
EUREKA							
Viking Sand	12.5	80	5	9.5	7.9	1.6	40.7
HOOSIER							
Bakken Sand	63.1	90	5	53.9	10.8	43.1	37.9
LASHBURN							
Waseca Sand	11.3	80	5	8.6	3.1	5.5	34.4
LONE ROCK							
Sparky Sand	2.5	80	5	1.9	0.2	1.7	34.4
NORTH HOOSIER							
Bakken Sand	11.0	85	5	8.9	4.0	4.9	37.7
NOTTINGHAM							
Alida	211.2	90	5	180.6	--	180.6	45.0
SILVERDALE							
Sparky Sand	27.2	80	5	21.0	12.4	8.6	34.4
SMILEY-DEWAR							
Viking Sand	15.7	80	5	11.9	7.4	4.5	38.3
TANGLEFLAGS							
Sparky Sand	4.7	85	5	3.8	3.0	0.8	34.4
TOTAL ASSOCIATED	2 413.4			1 683.5	846.1	837.4	
<u>DISSOLVED GAS RESERVES</u>							
Area II				765.8	560.9	204.9	
Area III				373.0	354.9	18.1	
Area IV				4 833.7	4 062.5	771.2	
TOTAL DISSOLVED				5 972.5	4 978.3	994.2	
PROVINCIAL TOTAL GAS RESERVES				92 071.1	33 832.1	58 239.0	

1984 PRODUCTION										
YEARLY TOTAL MILLION CUBIC METRES	DAILY AVERAGE MILLION CUBIC METRES/DAY	DEVELOPED AREA HECTARES	AVERAGE NET PAY METRES	AVERAGE POROSITY PER CENT	AVERAGE CONNATE WATER PER CENT	SPECIFIC GRAVITY	PRODUCING DEPTH METRES	PRODUCING SYSTEM	YEAR DISCOVERED	POOL PRODUCING HORIZON
ASSOCIATED GAS RESERVES										
ABERFELDY										
--	--	678	2.44	25.0	30.0	0.595	529	Cretaceous	1958	Sparky Sand
ALIDA EAST										
--	--	--	5.79	--	--	0.700	1 116	Mississippian	1954	Alida
ALIDA WEST										
--	--	--	3.05	--	--	0.700	1 137	Mississippian	1955	Alida
AVON HILL										
--	--	40	2.13	25.0	30.0	0.600	678	Cretaceous	1959	Viking Sand
BUFFALO COULEE										
--	--	8	3.05	23.0	25.0	0.565	808	Mississippian	1953	Bakken Sand
CANTUAR EAST										
--	--	1 127	8.69	25.6	41.0	0.599	960	Cretaceous	1957	Cantuar Sand
DEE VALLEY										
--	--	663	1.50	30.0	30.0	0.597	460	Cretaceous	1967	Waseca Sand
EPPING										
--	--	65	2.44	25.0	20.0	0.609	610	Cretaceous	1967	Sparky Sand
EUREKA										
0.318	0.001	65	2.01	22.4	35.0	0.622	689	Cretaceous	1954	Viking Sand
HOOSIER										
0.802	0.002	142	2.44	25.0	36.0	0.576	852	Mississippian	1972	Bakken Sand
LASHBURN										
--	--	129	4.51	25.0	30.0	0.592	498	Cretaceous	1966	Waseca Sand
LONE ROCK										
--	--	16	2.44	25.0	30.0	0.600	560	Cretaceous	1947	Sparky Sand
NORTH HOOSIER										
--	--	83	1.52	20.0	25.0	0.600	831	Mississippian	1960	Bakken Sand
NOTTINGHAM										
--	--	--	6.10	--	--	0.700	1 061	Mississippian	1956	Alida
SILVERDALE										
--	--	129	3.05	25.0	30.0	0.596	573	Cretaceous	1965	Sparky Sand
SMILEY-DEWAR										
0.221	0.001	65	2.29	25.5	32.0	0.608	694	Cretaceous	1973	Viking Sand
TANGLEFLAGS										
--	--	24	3.05	25.0	30.0	0.595	511	Cretaceous	1969	Sparky Sand
1.341	0.004	TOTAL ASSOCIATED								
DISSOLVED GAS RESERVES										
100.6	0.276	Area II								
--	--	Area III								
87.7	0.240	Area IV								
188.3	0.516	TOTAL DISSOLVED								
1 634.8	4.479	PROVINCIAL TOTAL GAS RESERVES								

OIL AND GAS UNITS

AND ENHANCED

RECOVERY PROJECTS



OIL & GAS UNITS

NAME	OPERATOR	PRODUCING ZONE	EFFECTIVE DATE	LATEST BOUNDARY REVISION	PROJECTS
AREA I					

ABERFELDY UNIT	HUSKY	SPARKY	12-1-62	5-1-66	WATERFLOOD (SUSPENDED)
					IN-SITU WET COMBUSTION
					STEAMFLOOD
BIG GULLY VOLUNTARY UNIT NO. 1	HUSKY	WASECA & MCLAREN	10-1-70	1-1-71	WATERFLOOD (SUSPENDED)
GOLDEN LAKE VOLUNTARY UNIT	HUSKY	SPARKY & WASECA	1-1-71	11-1-71	WATERFLOOD (SUSPENDED)
GULLY LAKE WASECA VOLUNTARY UNIT NO. 1	HUSKY	WASECA	8-1-71	--	WATERFLOOD
LASHBURN WASECA VOLUNTARY UNIT	HUSKY	WASECA	4-1-68	6-1-71	WATERFLOOD (SUSPENDED)
NORTH DULWICH SPARKY VOLUNTARY UNIT	HUSKY	SPARKY	10-1-70	--	WATERFLOOD
NORTHMINSTER SPARKY VOLUNTARY UNIT	HUSKY	SPARKY	3-1-70	9-1-70	WATERFLOOD (SUSPENDED)
SOUTH ABERFELDY SPARKY VOLUNTARY UNIT	HUSKY	SPARKY	6-1-69	5-1-70	WATERFLOOD
SOUTH EPPING UNIT NO. 1	TEXACO	SPARKY & G.P.	2-1-66	9-1-67	WATERFLOOD
SOUTH WEST EPPING SPARKY VOLUNTARY UNIT NO. 1	TEXACO	SPARKY	1-1-72	7-1-73	WATERFLOOD
TANGLEFLAGS VOLUNTARY UNIT NO. 2	DOMO	LLOYDMINSTER	3-1-81	--	WATERFLOOD
TANGLEFLAGS VOLUNTARY UNIT NO. 3	MOBIL	G.P., MCLAREN & LLOYDMINSTER	2-1-81	--	--
AREA II					

BAYHURST VIKING VOLUNTARY GAS UNIT	SPC	VIKING	11-1-66	--	GAS STORAGE
BROCK VIKING SAND GAS UNIT	HUSKY	VIKING	3-1-54	--	--
COLEVILLE-SMILEY VIKING SAND GAS UNIT	ESSO RESOURCES	VIKING	7-1-55	4-1-72	--
DODSLAND VIKING GAS VOLUNTARY UNIT	DOMO	VIKING	11-1-67	1-1-70	--
EAGLE LAKE VIKING VOLUNTARY UNIT	ESSO RESOURCES	VIKING	10-1-66	--	WATERFLOOD
GLENEATH UNIT	ERSKINE	VIKING	6-1-66	10-1-67	WATERFLOOD
GLIDDEN VIKING GAS VOLUNTARY UNIT NO. 1	WESTAR	VIKING	9-1-72	--	--
HOOSIER BAKKEN SAND VOL. UNIT NO. 1	DOMO	BAKKEN	3-1-81	--	WATERFLOOD

ENHANCED RECOVERY PROJECTS

ENHANCED RECOVERY PROJECTS					AVERAGE INJECTION RATE M ³ /DAY	NAME
WATER SOURCE	INJECTION PATTERN	ACTIVE WELLS PROD./INJ.		FIRST INJECTION		
						AREA I -----
MANNVILLE	INV. 9-SPOT & 5-SPOT	171	--	05-64	--	ABERFELDY UNIT
GLACIAL DRIFT	INV. 9-SPOT & 5-SPOT	34	--	07-69	--	
SURFACE WATER	INV. 9-SPOT	38	9	02-81	--	
DINA	5-SPOT	30	--	10-70	--	BIG GULLY VOLUNTARY UNIT NO. 1
DINA	MOD. 9-SPOT	66	--	04-71	--	GOLDEN LAKE VOLUNTARY UNIT
DINA	INV. & MOD. 9-SPOT	27	7	07-71	73	GULLY LAKE WASECA VOLUNTARY UNIT NO. 1
DINA	5-SPOT	41	--		--	LASHBURN WASECA VOLUNTARY UNIT
GLACIAL DRIFT	--	5	0	10-70	0	NORTH DULWICH SPARKY VOLUNTARY UNIT
DINA	5-SPOT	35	0	10-70	0	NORTHMINSTER SPARKY VOLUNTARY UNIT
DINA	5-SPOT	57	0	09-69	0	SOUTH ABERFELDY SPARKY VOLUNTARY UNIT
MANNVILLE	INV. 9-SPOT	62	25	08-66	822	SOUTH EPPING UNIT NO. 1
DINA	INV. 9-SPOT	42	13	03-72	341	SOUTH WEST EPPING SPARKY VOLUNTARY UNIT NO. 1
SURFACE WATER	INV. 9-SPOT	19	5	--	220	TANGLEFLAGS VOLUNTARY UNIT NO. 2
--	--	46	--	--	--	TANGLEFLAGS VOLUNTARY UNIT NO. 3
						AREA II -----
--	--	--	--	--	--	BAYHURST VIKING VOLUNTARY GAS UNIT
--	--	2	--	--	--	BROCK VIKING SAND GAS UNIT
--	--	33	--	--	--	COLEVILLE-SMILEY VIKING SAND GAS UNIT
--	--	12	--	--	--	DODSLAND VIKING GAS VOLUNTARY UNIT
BELLY RIVER	INV. 9-SPOT	164	16	01-67	163	EAGLE LAKE VIKING VOLUNTARY UNIT
BELLY RIVER	INV. 9-SPOT	120	26	10-66	269	GLENEATH UNIT
--	--	2	--	--	--	GLIDDEN VIKING GAS VOLUNTARY UNIT NO. 1
PRODUCED WATER	--	8	2	01-75	156	HOOSIER BAKKEN SAND VOL. UNIT NO. 1

NAME	OPERATOR	PRODUCING ZONE	EFFECTIVE DATE	LATEST BOUNDARY REVISION	PROJECTS
HOOSIER VIKING SAND GAS UNIT	UNITED CANSO	VIKING	8-1-57	--	--
LUCKY HILLS VIKING SAND VOLUNTARY GAS UNIT	ULTRAMAR	VIKING	6-1-71	--	--
NORTH EUREKA UNIT	UNITED CANSO	VIKING	9-1-65	12-1-71	WATERFLOOD
NORTH HOOSIER BAKKEN SAND VOLUNTARY UNIT	DOMO	BAKKEN	7-1-70	8-1-73	WATERFLOOD
NORTH HOOSIER BASAL BLAIRMORE VOLUNTARY UNIT	ERSKINE	MANNVILLE	1-1-69	5-1-80	WATERFLOOD
PLATO VIKING VOLUNTARY UNIT NO. 1	TRI LINK	VIKING	4-1-73	--	WATERFLOOD
SMILEY VIKING GAS VOLUNTARY UNIT NO. 4	WESTERN DECALTA	VIKING	6-1-70	--	--
SOUTH EUREKA UNIT	ULTRAMAR	VIKING	4-1-65	9-1-71	WATERFLOOD
TOTNES VIKING GAS VOLUNTARY UNIT NO. 1	ICG RESOURCES	VIKING	1-1-71	--	--
WEST BAYHURST VIKING GAS VOLUNTARY UNIT	OLIPHANT	VIKING	2-1-72	--	--
WHITESIDE UNIT	JCIP	VIKING	9-1-64	--	WATERFLOOD (SUSPENDED)
WHITESIDE VICTORIA VOLUNTARY GAS UNIT	ULTRAMAR	VICTORIA	1-1-68	--	--
AREA III -----					
ANTELOPE LAKE UPPER SHAUNAVON VOLUNTARY UNIT	WESTERN DECALTA	UPPER SHAUNAVON	3-1-75	--	WATERFLOOD
BATTRUM UNIT NO. 1	MOBIL	ROSERAY	10-1-64	6-1-69	WATERFLOOD IN-SITU WET COMBUSTION
BATTRUM UNIT NO. 2	MOBIL	ROSERAY	10-1-64	--	IN-SITU WET COMBUSTION
BATTRUM UNIT NO. 3	MOBIL	ROSERAY	6-1-66	--	WATERFLOOD IN-SITU WET COMBUSTION
BATTRUM UNIT NO. 4	SCEPTRE	ROSERAY	6-1-66	--	WATERFLOOD
BEVERLEY UNIT NO. 1	MOBIL	UPPER & LOWER ROSERAY	5-1-66	--	WATERFLOOD
BONE CREEK UNIT	SASKOIL	UPPER SHAUNAVON	6-1-58	7-1-60	WATERFLOOD
BUTTE VOLUNTARY UNIT	DOMO	UPPER SHAUNAVON	1-1-71	2-1-72	WATERFLOOD

WATER SOURCE	INJECTION PATTERN	ACTIVE WELLS PROD./INJ.		FIRST INJECTION	AVERAGE INJECTION RATE M ³ /DAY	NAME
--	--	16	--	--	--	HOOSIER VIKING SAND GAS UNIT
--	--	8	--	--	--	LUCKY HILLS VIKING SAND VOLUNTARY GAS UNIT
BELLY RIVER	INV. 9-SPOT	49	18	03-63	487	NORTH EUREKA UNIT
RIBSTONE CREEK	LINE DRIVE	16	3	08-70	754	NORTH HOOSIER BAKKEN SAND VOLUNTARY UNIT
LEA PARK	--	16	7	12-66	419	NORTH HOOSIER BASAL BLAIRMORE VOLUNTARY UNIT
BELLY RIVER	INV. 9-SPOT	13	1	01-73	6	PLATO VIKING VOLUNTARY UNIT NO. 1
--	--	--	--	--	--	SMILEY VIKING GAS VOLUNTARY UNIT NO. 4
RIBSTONE CREEK & BELLY RIVER	INV. 9-SPOT	67	19	09-73	136	SOUTH EUREKA UNIT
--	--	2	--	--	--	TOTNES VIKING GAS VOLUNTARY UNIT NO. 1
--	--	1	--	--	--	WEST BAYHURST VIKING GAS VOLUNTARY UNIT
PRODUCED WATER	--	30	1	05-65	7	WHITESIDE UNIT
--	--	3	--	--	--	WHITESIDE VICTORIA VOLUNTARY GAS UNIT
AREA III -----						
ROSERAY	--	3	1	10-76	14	ANTELOPE LAKE UPPER SHAUNAVON VOLUNTARY UNIT
BELLY RIVER	PERIPHERAL	67	2	03-62	1 504	BATTRUM UNIT NO. 1
--	--		7	10-66		
--	--	6	2	11-65	213	BATTRUM UNIT NO. 2
MANNVILLE	INV. 9-SPOT	25	2	12-66	279	BATTRUM UNIT NO. 3
--	--		3	08-67		
MANNVILLE	INV. 9-SPOT	12	5	08-66	504	BATTRUM UNIT NO. 4
MANNVILLE	PERIPHERAL	16	4	01-66	893	BEVERLEY UNIT NO. 1
BELLY RIVER	PERIPHERAL & INV. 9-SPOT	31	11	05-60	1 392	BONE CREEK UNIT
BELLY RIVER	INV. 9-SPOT	23	6	11-70	72	BUTTE VOLUNTARY UNIT

NAME	OPERATOR	PRODUCING ZONE	EFFECTIVE DATE	LATEST BOUNDARY REVISION	PROJECTS
CANTUAR UNIT	MOBIL	CANTUAR & LOWER ROSEMARY	10-1-59	--	WATERFLOOD
COVINGTON UNIT NO. 1	MOBIL	UPPER SHAUNAVON	7-1-69	--	WATERFLOOD
DELTA UNIT NO. 1	MOBIL	UPPER SHAUNAVON	4-1-66	6-1-69	WATERFLOOD
DELTA UNIT NO. 2	MOBIL	UPPER SHAUNAVON	8-1-69	--	WATERFLOOD
DOLLARD UNIT	ABERFORD	UPPER SHAUNAVON	9-1-55	7-1-72	WATERFLOOD
EAST BEVERLEY VOLUNTARY GAS UNIT NO. 1	MOBIL	CANTUAR	8-1-78	--	--
EAST CANTUAR GAS UNIT	DOMO	CANTUAR & ROSEMARY	3-1-75	--	GAS STORAGE
EAST CANTUAR UNIT NO. 1	MOBIL	CANTUAR & ROSEMARY	3-1-75	--	WATERFLOOD (CANTUAR & ROSEMARY)
EAST CANTUAR UNIT NO. 2	DOMO	ROSEMARY & CANTUAR	3-1-75	--	WATERFLOOD (ROSEMARY)
EAST DOLLARD VOLUNTARY UNIT	AMERICAN EAGLE	UPPER SHAUNAVON	10-1-70	--	WATERFLOOD
FOSTERTON MAIN UNIT	MOBIL	ROSEMARY	7-1-58	--	WATERFLOOD
FOSTERTON N.W. UNIT	MOBIL	ROSEMARY	7-1-58	9-1-70	WATERFLOOD (SUSPENDED)
					IN-SITU WET COMBUSTION
GULL LAKE CANTUAR VOLUNTARY UNIT NO. 1	DOMO	CANTUAR	5-1-72	--	WATERFLOOD
GULL LAKE NORTH SHAUNAVON POOL UNIT	MOBIL	UPPER SHAUNAVON	10-1-58	--	WATERFLOOD
GULL LAKE UPPER SHAUNAVON VOLUNTARY UNIT NO. 1	DOMO	UPPER SHAUNAVON	5-1-72	--	WATERFLOOD
HATTON GAS UNIT	SPC	MEDICINE HAT	5-1-59	--	--
HAZLET UNIT	NORCEN	ROSEMARY	8-1-66	--	--
ILLERBRUN VOLUNTARY UNIT	DOMO	UPPER SHAUNAVON	11-1-66	5-1-67	WATERFLOOD
INSTOW UNIT	ABERFORD	UPPER SHAUNAVON	10-1-59	--	WATERFLOOD
JOHNSTON UNIT	DOMO	BASAL CANTUAR & UPPER SHAUNAVON	1-1-63	--	WATERFLOOD (BASAL CANTUAR)
LEITCHVILLE SHAUNAVON VOLUNTARY UNIT	SUNCOR	SHAUNAVON	1-1-68	--	WATERFLOOD
NORTH PREMIER UNIT NO. 1	MOBIL	ROSEMARY & UPPER SHAUNAVON	10-1-64	--	WATERFLOOD (ROSEMARY)
NORTH PREMIER UNIT NO. 2	MOBIL	PREMIER SAND	7-1-66	--	WATERFLOOD

WATER SOURCE	INJECTION PATTERN	ACTIVE WELLS PROD./INJ.		FIRST INJECTION	AVERAGE INJECTION RATE M ³ /DAY	NAME
BELLY RIVER	PERIPHERAL	80 17	25 --	08-60 --	3 580 --	CANTUAR UNIT
ROSERAY SAND	--	2	1	11-68	60	COVINGTON UNIT NO. 1
BELLY RIVER	INV. 9-SPOT	35	11	12-65	1 440	DELTA UNIT NO. 1
BELLY RIVER	--	14	3	10-69	163	DELTA UNIT NO. 2
VIKING, BELLY R. & MANNVILLE	SEMI-PERIPHERAL	40	18	03-56	2 976	DOLLARD UNIT
--	--	2	--	--	--	EAST BEVERLEY VOLUNTARY GAS UNIT NO. 1
--	--	--	--	--	--	EAST CANTUAR GAS UNIT
MANNVILLE	--	6 7	2 3	09-75 03-65	194 273	EAST CANTUAR UNIT NO. 1
MANNVILLE	--	4 1	1 --	01-76 --	31 --	EAST CANTUAR UNIT NO. 2
BELLY RIVER	--	9	1	10-70	337	EAST DOLLARD VOLUNTARY UNIT
BELLY RIVER	LINE DRIVE	18	14	06-56	4 558	FOSTERTON MAIN UNIT
BELLY RIVER	--	--	--	03-57	--	FOSTERTON N.W. UNIT
--	--	6	1	03-70	145	
BELLY RIVER	PERIPHERAL & MOD. 9-SPOT	5	4	06-70	189	GULL LAKE CANTUAR VOLUNTARY UNIT NO. 1
SURFACE WATER	--	23	3	08-56	1 284	GULL LAKE NORTH SHAUNAVON POOL UNIT
BELLY RIVER	--	5	3	05-72	105	GULL LAKE UPPER SHAUNAVON VOLUNTARY UNIT NO. 1
--	--	161	--	--	--	HATTON GAS UNIT
--	--	3	--	--	--	HAZLET UNIT
BELLY RIVER	--	5	3	04-66	760	ILLERBRUN VOLUNTARY UNIT
BELLY RIVER & RAVENSCRAG	PERIPHERAL	47	22	12-57	3 180	INSTOW UNIT
SURFACE WATER --	-- --	4 1	2 --	03-63 --	96 --	JOHNSTON UNIT
BELLY RIVER	--	8	3	07-64	57	LEITCHVILLE SHAUNAVON VOLUNTARY UNIT
MANNVILLE	--	5 1	3 --	07-64	1 152	NORTH PREMIER UNIT NO. 1
MANNVILLE	--	1	1	06-67	130	NORTH PREMIER UNIT NO. 2

NAME	OPERATOR	PRODUCING ZONE	EFFECTIVE DATE	LATEST BOUNDARY REVISION	PROJECTS
NORTH PREMIER VOLUNTARY UNIT NO. 4	MOBIL	ROSERAY & UPPER SHAUNAVON	9-1-80	--	WATERFLOOD
NORTH PREMIER UPPER SHAUNAVON VOLUNTARY UNIT	SUNCOR	UPPER SHAUNAVON	11-1-72	--	WATERFLOOD
NORTH RAPDAN UPPER SHAUNAVON VOLUNTARY UNIT	ESSO RESOURCES	UPPER SHAUNAVON	2-1-68	5-1-68	WATERFLOOD
RAPDAN UNIT	ABERFORD	UPPER SHAUNAVON	10-1-57	7-1-65	WATERFLOOD
RAPDAN UPPER SHAUNAVON VOLUNTARY UNIT NO. 2	SASKOIL	UPPER SHAUNAVON	4-1-74	--	WATERFLOOD
SOUTHWEST SUCCESS VOLUNTARY UNIT	ATCOR	ROSERAY AND CANTUAR	4-1-83	--	WATERFLOOD
SUCCESS UNIT	MOBIL	ROSERAY AND FOSTERTON	12-1-57	--	WATERFLOOD
SUCCESS ALPHA UNIT	MOBIL	ROSERAY	7-1-60	--	WATERFLOOD
SUCCESS MAIN UNIT	MOBIL	CANTUAR, ROSERAY AND FOSTERTON	9-1-62	--	WATERFLOOD (ROSERAY)
SUCCESS NORTH ROSERAY VOLUNTARY UNIT	TRI LINK	ROSERAY	4-1-84	--	WATERFLOOD
SUFFIELD UNIT NO. 1	MOBIL	ROSERAY	7-1-66	4-1-72	WATERFLOOD
SUFFIELD UNIT NO. 2	MOBIL	UPPER SHAUNAVON	9-1-70	--	WATERFLOOD
SUFFIELD UNIT NO. 3	MOBIL	ROSERAY & UPPER SHAUNAVON	6-1-71	4-1-72	WATERFLOOD
VERLO ROSERAY SAND UNIT	MOBIL	ROSERAY	9-1-70	10-1-72	WATERFLOOD
WEST FOSTERTON VOLUNTARY UNIT	TEXACO	ROSERAY	3-1-67	--	WATERFLOOD
AREA IV -----					
ALAMEDA CENTRAL UNIT	GULF	MIDALE	12-1-62	6-1-69	WATERFLOOD
ALAMEDA EAST UNIT	DOMO	MIDALE	8-1-62	9-1-65	WATERFLOOD
ALAMEDA WEST VOLUNTARY UNIT NO. 1	ARGYLL	MIDALE	12-1-84		WATERFLOOD
ALIDA UNIT	MOBIL	ALIDA	12-1-57	--	--
ANTLER VOLUNTARY UNIT NO. 1	PLACID	MIDALE	11-1-71	--	WATERFLOOD
BENSON UNIT	SHELL	MIDALE	2-1-65	9-1-67	WATERFLOOD
BENSON MIDALE BEDS VOLUNTARY UNIT NO. 1	DOMO	MIDALE	11-1-67	6-1-68	WATERFLOOD

WATER SOURCE	INJECTION PATTERN	ACTIVE WELLS PROD./INJ.		FIRST INJECTION	AVERAGE INJECTION RATE M ³ /DAY	NAME
MANNVILLE	PERIPHERAL --	13 16	5 1	02-65 12-80	2 332 182	NORTH PREMIER VOLUNTARY UNIT NO. 4
MANNVILLE	--	7	2	02-73	18	NORTH PREMIER UPPER SHAUNAVON VOLUNTARY UNIT
BELLY RIVER	--	6	1	07-68	8	NORTH RAPDAN UPPER SHAUNAVON VOLUNTARY UNIT
BELLY RIVER	PERIPHERAL	31	14	11-62	733	RAPDAN UNIT
BELLY RIVER	PARTIAL 5-SPOT	4	1	04-74	6	RAPDAN UPPER SHAUNAVON VOLUNTARY UNIT NO. 2
--	--	11 1	1 --	10-80	115	SOUTHWEST SUCCESS VOLUNTARY UNIT
MANNVILLE	PERIPHERAL	22	4	08-58	1 866	SUCCESS UNIT
MANNVILLE	--	6	1	09-60	537	SUCCESS ALPHA UNIT
MANNVILLE	PERIPHERAL	12	4	09-56	785	SUCCESS MAIN UNIT
MANNVILLE	PERIPHERAL	9	--	06-82	--	SUCCESS NORTH ROSERAY VOLUNTARY UNIT
BELLY RIVER	PERIPHERAL	10	2	05-66	928	SUFFIELD UNIT NO. 1
BELLY RIVER	--	13	3	07-70	551	SUFFIELD UNIT NO. 2
BELLY RIVER	PERIPHERAL	10 4	4 1	06-70	1 096 42	SUFFIELD UNIT NO. 3
MANNVILLE	--	12	3	06-65	2 571	VERLO ROSERAY SAND UNIT
BELLY RIVER	--	8	3	04-67	332	WEST FOSTERTON VOLUNTARY UNIT
AREA IV -----						
MANNVILLE	INV. 9-SPOT	13	6	03-60	109	ALAMEDA CENTRAL UNIT
MANNVILLE	INV. 9-SPOT	37	20	12-62	454	ALAMEDA EAST UNIT
MANNVILLE	PERIPHERAL	7	--	12-84	--	ALAMEDA WEST VOLUNTARY UNIT NO. 1
--	--	26	--	--	--	ALIDA UNIT
MANNVILLE	--	3	1	11-68	28	ANTLER VOLUNTARY UNIT NO. 1
MANNVILLE	INV. 9-SPOT	40	10	11-64	204	BENSON UNIT
MANNVILLE	INV. 9-SPOT	14	1	11-67	14	BENSON MIDDLE BEDS VOLUNTARY UNIT NO. 1

NAME	OPERATOR	PRODUCING ZONE	EFFECTIVE DATE	LATEST BOUNDARY REVISION	PROJECTS
CANTAL FROBISHER-ALIDA BEDS VOLUNTARY UNIT NO. 1	SASKOIL	FROBISHER-ALIDA	1-1-72	--	--
CARNDUFF VOLUNTARY UNIT NO. 1	SCEPTRE	MIDALE	12-1-70	--	WATERFLOOD
CULLEN UNIT	MORCEN	MIDALE	10-1-65	5-1-66	--
DOUGLASTON-FROBISHER BEDS UNIT	DOME	FROBISHER	6-1-64	--	--
DOUGLASTON-MIDALE BEDS UNIT	DOME	MIDALE	6-1-64	10-1-67	WATERFLOOD
EAST CARNDUFF UNIT	GULF	MIDALE	5-1-62	11-1-65	WATERFLOOD
ELMORE FROBISHER BEDS VOLUNTARY UNIT NO. 1	ESSO RESOURCES	FROBISHER	12-1-69	--	WATERFLOOD
FLAT LAKE RATCLIFFE VOLUNTARY UNIT NO. 1	PANCANADIAN	RATCLIFFE	8-1-68	9-1-69	WATERFLOOD
FLETWODE ALIDA VOLUNTARY UNIT	CANADIAN OCCIDENTAL	ALIDA	10-1-68	--	--
GAINSBOROUGH FROBISHER-ALIDA VOLUNTARY UNIT	BERRY	FROBISHER-ALIDA	11-1-72	--	WATERFLOOD (FROBISHER)
GLEN EWEN UNIT	DOME	MIDALE	4-1-63	--	WATERFLOOD
HASTINGS FROBISHER UNIT	UNION	FROBISHER	7-1-71	--	WATERFLOOD
HASTINGS FROBISHER BEDS VOLUNTARY UNIT NO. 1	GULF	FROBISHER	1-1-70	--	WATERFLOOD
HASTINGS FROBISHER BEDS VOLUNTARY UNIT NO. 2	MONT	FROBISHER	10-1-70	--	WATERFLOOD
HUMMINGBIRD BIRDBEAR VOLUNTARY UNIT NO. 1	DOME	BIRDBEAR	12-1-68	--	--
HUMMINGBIRD RATCLIFFE VOLUNTARY UNIT NO. 1	DOME	RATCLIFFE	12-1-68	--	WATERFLOOD
HUNTOON MIDALE BEDS VOLUNTARY UNIT NO. 1	TEXACO	MIDALE	2-1-74	--	WATERFLOOD
INGOLDSBY MISSION CANYON VOLUNTARY UNIT	ESSO RESOURCES	ALIDA	9-1-66	--	--
KENOSSE TILSTON BEDS VOLUNTARY UNIT	ABERFORD	TILSTON	9-1-69	--	--
KISBEY UPPER HASTINGS VOLUNTARY UNIT NO. 1	DAG RESOURCES	UPPER HASTINGS	4-1-74	--	--
LAKE ALMA VOLUNTARY UNIT	PANCANADIAN	RATCLIFFE	4-1-69	--	WATERFLOOD
LAMPMAN UNIT	GULF	MIDALE	3-1-64	10-1-67	WATERFLOOD
LOST HORSE HILL FROBISHER-ALIDA BEDS VOLUNTARY UNIT NO. 1	ESSO RESOURCES	FROBISHER-ALIDA	1-1-71	--	--
MIDALE UNIT	SHELL	MIDALE	8-1-62	9-1-67	WATERFLOOD

WATER SOURCE	INJECTION PATTERN	ACTIVE WELLS PROD./INJ.		FIRST INJECTION	AVERAGE INJECTION RATE M ³ /DAY	NAME
--	--	3	--	--	--	CANTAL FROBISHER-ALIDA BEDS VOLUNTARY UNIT NO. 1
RAVENSCRAG	--	3	1	05-71	33	CARNDUFF VOLUNTARY UNIT NO. 1
--	--	8	--	--	--	CULLEN UNIT
--	--	4	--	--	--	DOUGLASTON-FROBISHER BEDS UNIT
MANNVILLE	LINE DRIVE	12	8	06-64	213	DOUGLASTON-MIDALE BEDS UNIT
MANNVILLE	INV. 9-SPOT	110	19	07-62	1 145	EAST CARNDUFF UNIT
MANNVILLE	INV. 9-SPOT	27	3	11-70	164	ELMORE FROBISHER BEDS VOLUNTARY UNIT NO. 1
MANNVILLE	INV. 9-SPOT	29	8	10-68	458	FLAT LAKE RATCLIFFE VOLUNTARY UNIT NO. 1
--	--	3	--	--	--	FLETWODE ALIDA VOLUNTARY UNIT
PRODUCED WATER	--	7	1	08-73	95	GAINSBOROUGH FROBISHER-ALIDA VOLUNTARY UNIT
MANNVILLE	INV. 9-SPOT	36	6	10-63	410	GLEN EWEN UNIT
MANNVILLE	INV. 9-SPOT	10	2	10-67	201	HASTINGS FROBISHER UNIT
MANNVILLE	PERIPHERAL	29	5	11-66	290	HASTINGS FROBISHER BEDS VOLUNTARY UNIT NO. 1
MANNVILLE	INV. 9-SPOT & PERIPHERAL	22	6	11-66	353	HASTINGS FROBISHER BEDS VOLUNTARY UNIT NO. 2
--	--	4	--	--	--	HUMMINGBIRD BIRDBEAR VOLUNTARY UNIT NO. 1
MANNVILLE	--	9	2	12-67	183	HUMMINGBIRD RATCLIFFE VOLUNTARY UNIT NO. 1
PRODUCED WATER	--	18	5	09-74	49	HUNTOON MIDALE BEDS VOLUNTARY UNIT NO. 1
--	--	37	--	--	--	INCOLDSBY MISSION CANYON VOLUNTARY UNIT
--	--	26	--	--	--	KENOSEE TILSTON BEDS VOLUNTARY UNIT
--	--	4	--	--	--	KISBEY UPPER HASTINGS VOLUNTARY UNIT NO. 1
MANNVILLE	--	5	3	06-70	355	LAKE ALMA VOLUNTARY UNIT
MANNVILLE	INV. 9-SPOT	9	3	04-64	80	LAMPMAN UNIT
--	--	24	--	--	--	LOST HORSE HILL FROBISHER-ALIDA BEDS VOLUNTARY UNIT NO. 1
MANNVILLE	INV. 9-SPOT	281	70	06-60	3 644	MIDALE UNIT

NAME	OPERATOR	PRODUCING ZONE	EFFECTIVE DATE	LATEST BOUNDARY REVISION	PROJECTS
NORTH ALAMEDA UNIT	GULF	MIDALE	5-1-63	--	WATERFLOOD
NORTH CANTAL UNIT	ESSO RESOURCES	ALIDA	1-1-66	4-1-69	--
NORTH CENTRAL WILLMAR VOLUNTARY UNIT	ABERFORD	FROBISHER-ALIDA	3-1-76	--	WATERFLOOD
NORTH DALESBORO UNIT NO. 1	ESSO RESOURCES	FROBISHER-ALIDA	12-1-70	--	WATERFLOOD
NORTHGATE MIDALE VOLUNTARY UNIT	SILVER BAY	MIDALE	1-1-84	--	WATERFLOOD
NOTTINGHAM NORTH ALIDA BEDS UNIT	MOBIL	ALIDA	10-1-60	--	--
OUNGRE VOLUNTARY UNIT NO. 1	SUNCOR	OUNGRE	1-1-68	12-1-69	WATERFLOOD
QUEENSVILLE WILLMAR KISBEY SAND VOLUNTARY UNIT	GULF	KISBEY SAND	7-1-69	--	--
ROSEBANK FROBISHER ALIDA BEDS VOLUNTARY UNIT NO. 1	ESSO RESOURCES	FROBISHER-ALIDA	3-1-69	7-1-71	--
SOUTH ALAMEDA UNIT	SUNCOR	MIDALE	10-1-65	--	WATERFLOOD
SOUTH PINTO UNIT	DOMO	MIDALE	2-1-65	10-1-66	WATERFLOOD
STEELMAN FROBISHER BEDS VOLUNTARY UNIT NO. 1	GULF	FROBISHER	10-1-70	--	--
STEELMAN NORTH MIDALE VOLUNTARY UNIT NO. 1	CHEROKEE	MIDALE	5-1-83	--	WATERFLOOD
STEELMAN UNIT NO. IA	ESSO RESOURCES	MIDALE	7-1-61	4-1-69	WATERFLOOD
STEELMAN UNIT NO. II	ESSO RESOURCES	MIDALE	7-1-61	--	WATERFLOOD
STEELMAN UNIT NO. III	GULF	MIDALE	7-1-61	--	WATERFLOOD
STEELMAN UNIT NO. IV	GULF	MIDALE	7-1-61	4-1-69	WATERFLOOD
STEELMAN UNIT NO. V	SUNCOR	MIDALE	7-1-61	7-1-65	WATERFLOOD
STEELMAN UNIT NO. VI	GULF	MIDALE	7-1-61	9-1-68	WATERFLOOD
STEELMAN UNIT NO. VII	SUNCOR	MIDALE	6-1-62	--	WATERFLOOD
VIEWFIELD VOLUNTARY UNIT NO. 1	COMAPLEX	FROBISHER	5-1-74	--	--
WEST CARNDUFF UNIT	ESSO RESOURCES	MIDALE	1-1-61	5-1-62	WATERFLOOD
WEYBURN UNIT	PANCANADIAN	MIDALE	7-1-63	3-1-71	WATERFLOOD
WILLMAR FROBISHER-ALIDA VOLUNTARY UNIT NO. 1	SCEPTRE	FROBISHER-ALIDA	1-1-68	--	WATERFLOOD
WORKMAN-FROBISHER VOLUNTARY UNIT NO. 1	SCURRY-RAINBOW	FROBISHER	4-1-67	--	WATERFLOOD
WORKMAN-MIDALE VOLUNTARY UNIT NO. 1	SADELLE	MIDALE	4-1-68	--	WATERFLOOD

WATER SOURCE	INJECTION PATTERN	ACTIVE WELLS PROD./INJ.		FIRST INJECTION	AVERAGE INJECTION RATE M ³ /DAY	NAME
MANVILLE	PERIPHERAL	7	4	12-59	90	NORTH ALAMEDA UNIT
--	--	10	--	--	--	NORTH CANTAL UNIT
MANVILLE	--	6	1	11-76	8	NORTH CENTRAL WILLMAR VOLUNTARY UNIT
MANVILLE	--	10	2	02-71	227	NORTH DALESBORD UNIT NO. 1
MANVILLE	INV. 9-SPOT	21	1	07-84	8	NORTHGATE MIDALE VOLUNTARY UNIT
--	--	24	--	--	--	NOTTINGHAM NORTH ALIDA BEDS UNIT
MANVILLE	INV. 9-SPOT	43	8	12-66	361	OUNGRE VOLUNTARY UNIT NO. 1
--	--	3	--	--	--	QUEENSVILLE WILLMAR KISBEY SAND VOLUNTARY UNIT
--	--	31	--	--	--	ROSEBANK FROBISHER ALIDA BEDS VOLUNTARY UNIT NO. 1
MANVILLE	INV. 9-SPOT	14	6	02-63	94	SOUTH ALAMEDA UNIT
MANVILLE	PERIPHERAL	26	6	02-65	261	SOUTH PINTO UNIT
--	--	8	--	--	--	STEELMAN FROBISHER BEDS VOLUNTARY UNIT NO. 1
MANVILLE	INV. 9-SPOT	14	--	09-83	--	STEELMAN NORTH MIDALE VOLUNTARY UNIT NO. 1
MANVILLE	INV. 9-SPOT	101	35	09-58	1 230	STEELMAN UNIT NO. IA
MANVILLE	INV. 9-SPOT	60	7	02-62	1 070	STEELMAN UNIT NO. II
MANVILLE	INV. 9-SPOT	59	19	01-62	1 203	STEELMAN UNIT NO. III
MANVILLE	INV. 9-SPOT	98	37	02-62	1 482	STEELMAN UNIT NO. IV
MANVILLE	INV. 9-SPOT	37	19	02-62	343	STEELMAN UNIT NO. V
MANVILLE	INV. 9-SPOT	103	42	02-62	2 690	STEELMAN UNIT NO. VI
MANVILLE	INV. 9-SPOT	13	3	10-62	104	STEELMAN UNIT NO. VII
--	--	8	--	--	--	VIEWFIELD VOLUNTARY UNIT NO. 1
MANVILLE	INV. 9-SPOT	29	12	05-61	449	WEST CARNDUFF UNIT
MANVILLE	INV. 9-SPOT	481	130	04-64	6 522	WEYBURN UNIT
MANVILLE	--	18	4	02-68	333	WILLMAR FROBISHER-ALIDA VOLUNTARY UNIT NO. 1
MANVILLE	INV. 9-SPOT	28	13	06-67	741	WORKMAN-FROBISHER VOLUNTARY UNIT NO. 1
MANVILLE	INV. 9-SPOT	5	1	04-68	38	WORKMAN-MIDALE VOLUNTARY UNIT NO. 1

NAME	OPERATOR	PRODUCING ZONE	EFFECTIVE DATE	LATEST BOUNDARY REVISION	PROJECTS
WORKMAN-MIDALE VOLUNTARY UNIT NO. 2	SCURRY-RAINBOW	MIDALE	9-1-68	--	WATERFLOOD

WATER SOURCE	INJECTION PATTERN	ACTIVE WELLS PROD./INJ.	FIRST INJECTION	AVERAGE INJECTION RATE M ³ /DAY	NAME
MANVILLE	--	6 1	09-68	85	WORKMAN-MIDALE VOLUNTARY UNIT NO. 2

NON-UNIT

NAME	OPERATOR	PRODUCING ZONE	EFFECTIVE DATE	LATEST PROJECT REVISION	PROJECTS
AREA I -----					
CELTIC WASECA SAND	MOBIL	WASECA & G.P.	12-8-77	8-31-84	INTERMITTENT STEAM INJECTION
EYEHILL CUMMINGS SAND	MURPHY	CUMMINGS	12-8-77	5-15-84	IN-SITU COMBUSTION
GOLDEN LAKE SOUTH SPARKY SAND	HUSKY	SPARKY	11-6-68	5-31-83	IN-SITU WET COMBUSTION
GOLDEN LAKE SOUTH WASECA SAND	HUSKY	WASECA	3-19-81	6-6-84	IN-SITU WET COMBUSTION
GOLDEN LAKE SOUTH WASECA SAND	HUSKY	WASECA	2-8-82	--	IN-SITU OXYGEN WET-COMBUSTION
LOWE ROCK SPARKY SAND	TEXACO	SPARKY	10-24-83	--	STEAMFLOOD
MISCELLANEOUS LLOYDMINSTER SAND	TEXASGULF	LLOYDMINSTER	2-4-74	3-31-82	CYCLIC STEAM STIMULATION
PIKES PEAK WASECA SAND	HUSKY	WASECA	6-10-81	2-28-84	CYCLIC STEAM
SILVERDALE SPARKY SAND	HOME	SPARKY	6-27-84	--	WATER ALTERNATING GAS
TANGLEFLAGS G.P. SAND	HUSKY	G.P.	11-30-83	--	IN-SITU WET COMBUSTION
AREA II -----					
BUFFALO COULEE BAKKEN SAND	SASKOIL	BAKKEN	11-28-69	11-23-79	WATERFLOOD
BUFFALO COULEE BAKKEN SAND	PAGE	BAKKEN	11-23-79	7-31-80	WATERFLOOD
COLEVILLE BAKKEN	GENERAL AMERICAN	BAKKEN	12-18-58	6-29-84	WATERFLOOD
DODSLAND VIKING SAND	PAGE	VIKING	9-20-83	--	WATERFLOOD
SMILEY-DEWAR VIKING	ESSO RESOURCES	VIKING	9-22-61	5-2-66	WATERFLOOD
SMILEY-DEWAR VIKING	PETRO-CANADA	VIKING	1-30-73	11-1-73	WATERFLOOD
AREA III -----					
BEVERLEY CANTUAR SAND	MOBIL	CANTUAR	9-29-71	--	PILOT WATERFLOOD
JAVA CANTUAR SAND	TIBER	CANTUAR	6-27-84	--	WATERFLOOD
LEON LAKE SHAUNAVON	ABERFORD	SHAUNAVON	5-5-64	10-17-68	PILOT WATERFLOOD

ENHANCED RECOVERY PROJECTS

ENHANCED RECOVERY PROJECTS				AVERAGE		
WATER SOURCE	INJECTION PATTERN	ACTIVE WELLS PROD./INJ.		FIRST INJECTION	INJECTION RATE M ³ /DAY	NAME
						AREA I -----
SURFACE WATER --	INV. 9-SPOT INV. 5-SPOT	25 5	-- --	10-80	-- --	CELTIC WASECA SAND
GLACIAL DRIFT	INV. 5-SPOT	24	9	06-80	--	EYEHILL CUMMINGS SAND
DINA SAND	INV. 7-SPOT & INV. 9-SPOT	34	4	07-68	--	GOLDEN LAKE SOUTH SPARKY SAND
PRODUCED WATER	INV. 5-SPOT	16	2	04-82	--	GOLDEN LAKE SOUTH WASECA SAND
GLACIAL DRIFT	INV. 7-SPOT	10	2	07-82	--	GOLDEN LAKE SOUTH WASECA SAND
SURFACE WATER	INV. 7-SPOT	3	3	11-84	--	LOME ROCK SPARKY SAND
SURFACE WATER	--	19	3	07-74	--	MISCELLANEOUS LLOYDMINSTER SAND
SURFACE WATER	--	48	--	07-81	--	PIKES PEAK WASECA SAND
SPARKY SAND	--	8	--	--	--	SILVERDALE SPARKY SAND
SURFACE WATER	INV. 7-SPOT	16	--	--	--	TANGLEFLAGS G.P. SAND
						AREA II -----
BELLY RIVER	INV. 9-SPOT	16	3	07-69	23	BUFFALO COULEE BAKKEN SAND
BELLY RIVER	INV. 9-SPOT	21	5	08-80	27	BUFFALO COULEE BAKKEN SAND
BELLY RIVER	INV. 9-SPOT & INV. 5-SPOT	195	87	01-59	4 168	COLEVILLE BAKKEN
DEADWOOD	INV. 5-SPOT	18	8	02-84	101	DODSLAND VIKING SAND
BELLY RIVER	INV. 9-SPOT	112	26	02-62	539	SMILEY-DEWAR VIKING
BELLY RIVER	INV. 9-SPOT	30	11	03-73	116	SMILEY-DEWAR VIKING
						AREA III -----
BELLY RIVER	INV. 9-SPOT	8	1	10-71	25	BEVERLEY CANTUAR SAND
MANVILLE	--	--	1	07-84	--	JAVA CANTUAR SAND
RAVENS CRAG	--	3	1	08-64	14	LEON LAKE SHAUNAVON

DEVELOPMENT AND

PRODUCING DATA



OIL POOLS

POOL NAME	PRODUCTION			NATURAL DEPLETION MECHANISM	ENHANCED RECOVERY	SPACING REGULATIONS*	
	WELLS CAPABLE	WELLS ON	DAILY M3/WELL			DRAINAGE UNITS (LSDS)	TARGET AREA
ABERFELDY SPARKY SAND	372	317	2.0	SOLUTION GAS DRIVE WATER DRIVE PART. GAS CAP DRIVE	WATERFLOOD IN: (1)ABERFELDY UNIT(SUSPENDED) (2)SOUTH ABERFELDY SPARKY VOLUNTARY UNIT(SUSPENDED) IN-SITU WFT COMBUSTION IN: ABERFELDY UNIT STEAMFLOOD IN: ABERFELDY UNIT	1 SE 1/4 OF LSD. EXCEPT: (A)TWP 49, RGE 26, SEC: NW1/4-4, N1/2-5,8,9,W1/2-10,SW1/4-15,16,17, E1/2&NW1/4-18,20,21,28,29. TWP 48, RGE 27, SEC: N1/2-35, NW1/4-36. TWP 49, RGE 27, SEC: 1,2,11,12. WHERE: 1 NW 1/4 OF LSD. (B)TWP 49, RGE 27, SEC: 14,15, NE1/4-21,22,23,27,28. WHERE: 1 NE 1/4 OF LSD.	
ALAMEDA MIDALE BEDS	125	108	1.6	SOLUTION GAS DRIVE	WATERFLOOD IN: (1)ALAMEDA CENTRAL UNIT (2)ALAMEDA EAST UNIT (3)NORTH ALAMEDA UNIT (4)SOUTH ALAMEDA UNIT	2 ODD NUMBERED LSDS.	
ALAMEDA WEST FROBISHER BEDS	1	0	0.0	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
ALAMEDA WEST MIDALE BEDS	8	8	3.6	SOLUTION GAS DRIVE	WATERFLOOD IN: ALAMEDA WEST VOLUNTARY UNIT NO. 1	2 ODD NUMBERED LSDS.	
ALIDA EAST ALIDA BEDS	34	28	2.4	WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
ALIDA WEST ALIDA BEDS	32	32	3.1	WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
ALSASK BASAL BLAIRMORE SAND	3	3	1.2	SOLUTION GAS DRIVE	NONE	1 CENTRE OF LSD. EXCEPT: TWP 29, RGE 29, SEC: NW1/4-10, W1/2-15,SW1/4-22. (SEE POOL REGULAT- IONS FOR FRACTIONAL DRAINAGE UNITS)	
ANTELOPE LAKE EAST ROSERAY SAND	2	2	1.2	SOLUTION GAS DRIVE	WATERFLOOD	2 ODD NUMBERED LSDS.	
ANTELOPE LAKE UPPER SHAUNAVON	4	4	2.8	SOLUTION GAS DRIVE	WATERFLOOD IN: ANTELOPE LAKE UPPER SHAUNAVON VOLUNTARY UNIT	2 EVEN NUMBERED LSDS.	
ARCOLA FROBISHER-ALIDA BEDS	25	23	4.3	SOLUTION GAS DRIVE PARTIAL WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
AVON HILL VIKING	137	118	0.8	SOLUTION GAS DRIVE	NONE	1 CENTRE OF LSD.	
BALDWINTON SPARKY SAND	19	12	1.5	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
BATTLE CREEK MADISON	1	1	1.7	WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
BATTLE CREEK UPPER SHAUNAVON	2	2	1.9	PARTIAL WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
BATTRUM NORTH ROSERAY SAND	14	13	4.0	SOLUTION GAS DRIVE	NONE	1 CENTRE OF LSD.	
BATTRUM ROSERAY SAND	166	112	7.1	SOLUTION GAS DRIVE PARTIAL WATER DRIVE	IN-SITU WFT COMBUSTION IN: (1)BATTRUM UNIT NO. 1 (2)BATTRUM UNIT NO. 2 (3)BATTRUM UNIT NO. 3 WATERFLOOD IN: (1)BATTRUM UNIT NO. 1 (2)BATTRUM UNIT NO. 3 (3)BATTRUM UNIT NO. 4	1 CENTRE OF LSD. EXCEPT: (A)TWP 18, RGE 16, SEC: 30. TWP 18, RGE 17, SEC: 25,26, E1/2-27,NE1/4-33,34,35,SE1/4&W1/2-36 WHERE: 2 EVEN NUMBERED LSDS. (B)TWP 19, RGE 17, SEC: 1,51/2-2. WHERE: 2 ODD NUMBERED LSDS.	
BENCH UPPER SHAUNAVON	28	22	2.7	SOLUTION GAS DRIVE	NONE	4 NW LSD. OF 1/4 SECTION EXCEPT: TWP 11, RGE 18, SEC: W1/2-16. WHERE: 4 NE LSD. OF 1/4 SECTION	
BENSON MIDALE BEDS	95	86	2.2	SOLUTION GAS DRIVE	WATERFLOOD IN: (1)BENSON UNIT (2)BENSON MIDALE VOLUNTARY UNIT NO. 1	4 NW LSD. OF 1/4 SECTION EXCEPT: TWP 6, RGE 8, SEC: NE1/4-19,SW1/4-30 W1/2-31. TWP 6, RGE 9, SEC: NE1/4-20,21,NE1/4 &W1/2-22,N1/2-23,25,26,27,28,29, S1/2-30,36. TWP 6, RGE 10, SEC: E1/2-24,SE1/4-25 WHERE: 2 ODD NUMBERED LSDS.	
BEVERLEY CANTUAR SAND	36	34	2.1	SOLUTION GAS DRIVE	PILOT WATERFLOOD	2 EVEN NUMBERED LSDS.	
BEVERLEY NORTH CANTUAR SAND	31	25	1.9	SOLUTION GAS DRIVE	NONE	2 ODD NUMBERED LSDS.	
BEVERLEY UPPER ROSERAY SAND	31	22	3.7	SOLUTION GAS DRIVE GAS CAP DRIVE	WATERFLOOD IN: BEVERLEY UNIT NO. 1	1 CENTRE OF LSD.	
BIENFAIT MIDALE BEDS	10	10	8.9	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
BIG GULLY MCLAREN SAND BIG GULLY WASECA SAND	49	33	2.5	SOLUTION GAS DRIVE	WATERFLOOD IN: BIG GULLY VOLUNTARY UNIT NO. 1 (SUSPENDED)	1 NW 1/4 OF LSD. EXCEPT: TWP 50, RGE 25, SEC: NE1/4-7,N1/2-8, SW1/4-17,SE1/4-18. WHERE: 1 NE 1/4 OF LSD.	
BONE CREEK UPPER SHAUNAVON	31	31	3.4	SOLUTION GAS DRIVE	WATERFLOOD IN: BONE CREEK UNIT	2 EVEN NUMBERED LSDS. EXCEPT: TWP 11, RGE 19, SEC: W1/2-2,3,E1/2-4 WHERE: 2 ODD NUMBERED LSDS.	
BROMHEAD MIDALE BEDS	8	6	2.9	SOLUTION GAS DRIVE	NONE	4 NW LSD. OF 1/4 SECTION	

POOL NAME	PRODUCTION			NATURAL DEPLETION MECHANISM	ENHANCED RECOVERY	SPACING REGULATIONS*	
	WELLS CAPABLE	WELLS ON	DAILY M ³ /WELL			DRAINAGE UNITS (LSDS)	TARGET AREA
BROWNING FROBISHER-ALIDA BEDS	34	32	2.4	WATER DRIVE	NONE	2	ODD NUMBERED LSDS.
BRYANT FROBISHER BEDS	3	3	3.0	SOLUTION GAS DRIVE	NONE	4	NW LSD OF 1/4 SECTION.
BRYANT MIDALE BEDS	16	11	1.7	SOLUTION GAS DRIVE	NONE	4	NW LSD OF 1/4 SECTION.
BUFFALO COULEE BAKKEN SAND	44	34	1.6	SOLUTION GAS DRIVE	WATERFLOOD	1/2	NE & SW 1/4 OF LSD.
BUFFALO COULEE NORTH BAKKEN SAND	16	13	2.1	SOLUTION GAS DRIVE	NONE	1	SW 1/4 OF LSD.
BUTTE UPPER SHAUNAVON	29	25	4.4	SOLUTION GAS DRIVE	WATERFLOOD IN: BUTTE VOLUNTARY UNIT	2	ODD NUMBERED LSDS.
BUZZARD LLOYDMINSTER SAND	41	35	1.8	SOLUTION GAS DRIVE	NONE	1	SE 1/4 OF LSD.
CACTUS LAKE BASAL MANNVILLE- BAKKEN SAND	122	113	5.4	SOLUTION GAS DRIVE	NONE	1	CENTRE OF LSD
CANTAL FROBISHER-ALIDA BEDS	28	24	2.3	WATER DRIVE	NONE	2	EVEN NUMBERED LSDS.
CANTUAR EAST CANTUAR SAND	8	7	4.2	SOLUTION GAS DRIVE GAS CAP DRIVE	WATERFLOOD IN: EAST CANTUAR UNIT NO. 1 GAS STORAGE IN: EAST CANTUAR GAS UNIT	2	SW 1/4 OF EVEN LSDS.
CANTUAR EAST ROSERAY SAND	20	12	3.3	SOLUTION GAS DRIVE GAS CAP DRIVE	WATERFLOOD IN: (1)EAST CANTUAR UNIT NO. 1 (2)EAST CANTUAR UNIT NO. 2 GAS STORAGE IN: EAST CANTUAR GAS UNIT	2	SW 1/4 OF EVEN LSDS.
CANTUAR LOWER ROSERAY SAND	24	16	7.4	WATER DRIVE	NONE	1	SW 1/4 OF LSD.
CANTUAR MAIN CANTUAR SAND	90	81	3.6	SOLUTION GAS DRIVE GAS CAP DRIVE	WATERFLOOD IN: CANTUAR UNIT	1	SW 1/4 OF LSD.
CARNDUFF FROBISHER BEDS	21	20	2.1	WATER DRIVE	NONE	2	ODD NUMBERED LSDS. EXCEPT: TWP 3, RGE 33, SEC: W1/2-5,6. TWP 3, RGE 34, SEC: 1,2,3,4,9,10,11, W1/2-12,W1/2-14,15,16. WHERE:
CARNDUFF MIDALE BEDS	176	169	1.0	SOLUTION GAS DRIVE	WATERFLOOD IN: (1)WEST CARNDUFF UNIT (2)EAST CARNDUFF UNIT (3)CARNDUFF VOLUNTARY UNIT NO. 1	2	EVEN NUMBERED LSDS. EXCEPT: TWP 3, RGE 33, SEC: NE1/4NW1/2-4, 5,6,7,8,9,16,17,S1/2-18. TWP 3, RGE 34, SEC: 1,2,3,4,11,12, S1/2-13. WHERE:
CELTIC G.P. SAND	53	52	4.3	SOLUTION GAS DRIVE	PILOT INTERMITTENT STEAM INJECTION	2	EVEN NUMBERED LSDS.
CELTIC MANNVILLE SANDS	4	4	1.7	SOLUTION GAS DRIVE	NONE	1	SE 1/4 OF LSD.
CELTIC SPARKY SAND	30	27	2.8	SOLUTION GAS DRIVE	NONE	1	SE 1/4 OF LSD.
CELTIC WASECA SAND	90	74	3.6	SOLUTION GAS DRIVE	PILOT INTERMITTENT STEAM INJECTION	1	SE 1/4 OF LSD.
CLARILAW FROBISHER-ALIDA BEDS	12	12	2.5	SOLUTION GAS DRIVE	NONE	2	ODD NUMBERED LSDS.
CLINTONVILLE SHAUNAVON	6	5	1.1	SOLUTION GAS DRIVE	NONE	4	NW LSD. OF 1/4 SECTION
COLEVILLE BAKKEN SAND	257	249	2.3	SOLUTION GAS DRIVE	WATERFLOOD	1/2	NE & SW 1/4 OF LSDS.
COLEVILLE MANNVILLE SAND	14	13	1.8	SOLUTION GAS DRIVE	NONE	1	SW 1/4 OF LSD.
COLEVILLE SOUTH BAKKEN SAND	18	17	4.8	SOLUTION GAS DRIVE	NONE	1	NE 1/4 OF LSD.
COLEVILLE SOUTH MANNVILLE SAND	5	3	2.4	SOLUTION GAS DRIVE	NONE	1	NE 1/4 OF LSD.
COSINE LAKE LLOYDMINSTER SAND	18	15	1.7	GAS CAP DRIVE	NONE	1	SE 1/4 OF LSD.
COURT BAKKEN SAND	33	32	5.3	SOLUTION GAS DRIVE	NONE	1	SE 1/4 OF LSD.
COVINGTON UPPER SHAUNAVON	4	2	1.7	SOLUTION GAS DRIVE PARTIAL WATER DRIVE	WATERFLOOD IN: COVINGTON UNIT NO 1	2	EVEN NUMBERED LSDS.
COVINGTON WEST UPPER SHAUNAVON	4	3	3.1	SOLUTION GAS DRIVE	NONE	4	NE LSD. OF 1/4 SECTION
CRYSTAL HILL SOURIS VALLEY BEDS	7	5	1.2	WATER DRIVE	NONE	4	CENTRE OF 1/4 SECTION
DALESBORO FROBISHER-ALIDA BEDS	1	1	2.1	PROBABLE WATER DRIVE	NONE	2	ODD NUMBERED LSDS.
DEE VALLEY EAST SPARKY SAND	12	7	1.1	SOLUTION GAS DRIVE	NONE	1	SE 1/4 OF LSD.
DEE VALLEY EAST WASECA SAND	14	7	2.2	SOLUTION GAS DRIVE	NONE	1	SE 1/4 OF LSD.
DEE VALLEY WASECA SAND	55	43	2.2	SOLUTION GAS DRIVE	NONE	1	SE 1/4 OF LSD.
DELTA UPPER SHAUNAVON	64	56	2.3	SOLUTION GAS DRIVE	WATERFLOOD IN: (1)DELTA UNIT NO. 1 (2)DELTA UNIT NO. 2	2	EVEN NUMBERED LSDS.
DODSLAND VIKING SAND	1921	1839	1.1	SOLUTION GAS DRIVE	WATERFLOOD IN: (1)GLENEATH UNIT (2)EAGLE LAKE VIKING VOLUNTARY UNIT PILOT WATERFLOOD	1	CENTRE OF LSD.
DOLLARD UPPER SHAUNAVON	59	51	8.8	SOLUTION GAS DRIVE	WATERFLOOD IN: (1)DOLLARD UNIT (2)EAST DOLLARD VOLUNTARY UNIT	4	NW LSD. OF 1/4 SECTION

POOL NAME	PRODUCTION			NATURAL DEPLETION MECHANISM	ENHANCED RECOVERY	SPACING REGULATIONS*	
	WELLS CAPABLE	WELLS ON	DAILY M ³ /WELL			DRAINAGE UNITS (LSDS)	TARGET AREA
DRUID MANNVILLE SANDS	12	8	1.4	SOLUTION GAS DRIVE	NONE	1 CENTRE OF LSD.	
DULWICH SPARKY SAND	143	75	1.0	SOLUTION GAS DRIVE	NONE	1/4 EACH 1/4 OF LSD.	
DULWICH NORTH SPARKY SAND	6	5	2.2	SOLUTION GAS DRIVE	WATERFLOOD IN: NORTH DULWICH VOLUNTARY UNIT (SUSPENDED)	1/2 NE & SW 1/4 OF LSDS.	
EASTBROOK UPPER SHAUNAVON	4	4	1.8	SOLUTION GAS DRIVE	NONE	2 EVEN NUMBERED LSDS.	
EASTEND SHAUNAVON	10	8	1.5	SOLUTION GAS DRIVE	NONE	2 EVEN NUMBERED LSDS. EXCEPT: TWP 6, RGE 19, SEC: 5, 6, 7, 8, W1/2-10. TWP 6, RGE 20, SEC: E1/2-1. WHERE: 4 NW LSD. IN 1/4 SECTION	
EAST PINTO FROBISHER BEDS	0	0	0.0	PROBABLE WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
EAST PINTO MIDALE BEDS	1	1	1.2	SOLUTION GAS DRIVE	NONE	2 EVEN NUMBERED LSDS.	
EDAM WASECA SAND	20	8	1.4	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
EDAM WEST C.P. SAND	8	5	5.3	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
EDAM WEST MANNVILLE SAND	23	20	5.3	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
EDAM WEST SPARKY SAND	25	22	5.2	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
EDAM WEST WASECA SAND	18	15	4.1	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
EDENVALE TILSTON BEDS	10	6	2.1	PARTIAL WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
ELMORE FROBISHER BEDS	33	32	4.3	SOLUTION GAS DRIVE PARTIAL WATER DRIVE	WATERFLOOD IN: ELMORE FROBISHER BEDS VOLUNTARY UNIT NO. 1	2 ODD NUMBERED LSDS.	
ELMORE MIDALE BEDS	2	2	2.1	SOLUTION GAS DRIVE	NONE	2 ODD NUMBERED LSDS.	
EPPING C.P. SAND	20	15	1.7	SOLUTION GAS DRIVE	WATERFLOOD IN: SOUTH EPPING UNIT NO. 1	1 SE 1/4 OF LSD. EXCEPT: (A)TWP 47, RGE 27, SEC: S1/2&NW1/4-31, SW1/4-32. TWP 48, RGE 27, SEC: SW1/4-6. TWP 47, RGE 28, SEC: N1/2-25, 34, 35, 36. TWP 48, RGE 28, SEC: S1/2-1, S1/2-2. WHERE: 1 NW 1/4 OF LSD. (B)TWP 47, RGE 27, SEC: W1/2-17, 18, 19, 20, S1/2&NW1/4-29, 30. WHERE: 1/2 NW & SE 1/4 OF LSDS.	
EPPING SPARKY SAND	276	228	1.6	SOLUTION GAS DRIVE	WATERFLOOD IN: (1)SOUTH EPPING UNIT NO. 1 (2)SOUTH WEST EPPING SPARKY VOLUNTARY UNIT NO. 1	1 SE 1/4 OF LSD. EXCEPT: (A)TWP 47, RGE 27, SEC: W1/2-17, 18, 19, 20, W1/2&SE1/4-29, 30, W1/2&SE1/4-31, SW1/4-32. TWP 48, RGE 27, SEC: SW1/4-6. TWP 47, RGE 28, SEC: N1/2-25, 34, 35, 36. TWP 48, RGE 28, SEC: S1/2-1, S1/2-2, SE1/4-3. WHERE: 1/2 NW & SE 1/4 OF LSDS.	
EUREKA VIKING	190	177	1.1	SOLUTION GAS DRIVE	WATERFLOOD IN: (1)NORTH EUREKA UNIT (2)SOUTH EUREKA UNIT	1 CENTRE OF LSD.	
EYEHILL CUMMINGS SAND	27	24	2.9	SOLUTION GAS DRIVE PARTIAL WATER DRIVE	PILOT IN-SITU DRY COMBUSTION	1 CENTRE OF LSD.	
FERTILE TILSTON BEDS	3	3	3.4	WATER DRIVE	NONE	1 CENTRE OF LSD.	
FLAT LAKE RATCLIFFE BEDS	36	34	5.4	SOLUTION GAS DRIVE	WATERFLOOD IN: FLAT LAKE RATCLIFFE VOLUNTARY UNIT NO. 1	4 SW LSD. IN 1/4 SECTION EXCEPT: TWP 1, RGE 16, SEC: S1/2-1, S1/2-2, S1/2-3, S1/2-4, S1/2-5, S1/2-6. WHERE: WELLS LOCATED A MINIMUM DISTANCE OF 1600 FEET FROM U.S. BORDER.	
FLORENCE FROBISHER BEDS	5	3	1.7	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
FOREST BANK MANNVILLE SANDS	13	10	2.0	SOLUTION GAS DRIVE	NONE	1 SW 1/4 OF LSD. EXCEPT: (A)TWP 49, RGE 24, SEC: 32. TWP 49, RGE 24, SEC: 6. WHERE: 1 SE 1/4 OF LSD. (B)TWP 49, RGE 24, SEC: 7&18. TWP 49, RGE 25, SEC: 12&13. WHERE: 1 NE 1/4 OF LSD.	
FOREST BANK SPARKY SAND	15	10	3.0	SOLUTION GAS DRIVE	NONE	1 SW 1/4 OF LSD. EXCEPT: (SEE FOREST BANK MANNVILLE SANDS)	
FOREST BANK WASECA SAND	23	10	2.1	SOLUTION GAS DRIVE	NONE	1 SW 1/4 OF LSD. EXCEPT: (SEE FOREST BANK MANNVILLE SANDS)	

POOL NAME	PRODUCTION			NATURAL DEPLETION MECHANISM	ENHANCED RECOVERY	SPACING REGULATIONS*	
	WELLS CAPABLE	WELLS ON	DAILY M3/WELL			DRAINAGE UNITS (LSDS)	TARGET AREA
FOSTERTON ROSEY SAND	42	32	7.9	SOLUTION GAS DRIVE	WATERFLOOD IN: (1) FOSTERTON MAIN UNIT (2) FOSTERTON NORTHWEST UNIT (SUSPENDED) (3) WEST FOSTERTON VOLUNTARY UNIT IN-SITU WET COMBUSTION IN: FOSTERTON NORTHWEST UNIT	1 SW 1/4 OF LSD. EXCEPT: TWP 17, RGE 18, SEC: 4, E1/2-5, E1/2-8 9, LSDS: 1, 2, 3, 4, 8, 9, 16-18, LSDS: 1 & 2-17 WHERE: 1 CENTRE OF LSD.	
FREDA LAKE RATCLIFFE BEDS	34	33	3.3	SOLUTION GAS DRIVE	NONE	2 ODD NUMBERED LSDS.	
FREEMONT SPARKY SAND	18	12	2.3	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
FREEMONT WASECA SAND	20	14	1.5	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
FREESTONE FROBISHER-ALIDA BEDS	18	18	3.5	WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
FRYS TILSTON-SOURIS VALLEY BEDS	10	10	1.9	SOLUTION GAS DRIVE	NONE	2 EVEN NUMBERED LSDS.	
FURNESS SPARKY SAND	46	30	1.9	SOLUTION GAS DRIVE	NONE	1/4 CENTRE OF EACH 1/4 LSD.	
FUSILIER BAKKEN SAND	12	8	6.1	SOLUTION GAS DRIVE GAS CAP DRIVE	NONE	1 CENTRE OF LSD.	
GAINSBOROUGH FROBISHER-ALIDA BED	20	18	1.6	SOLUTION GAS DRIVE	WATERFLOOD IN: GAINSBOROUGH FROBISHER-ALIDA VOLUNTARY UNIT	2 ODD NUMBERED LSDS.	
GLEN EWEN FROBISHER BEDS	5	5	3.2	PROBABLE WATER DRIVE	NONE	4 SE LSD. IN 1/4 SECTION	
GLEN EWEN MIDALE BEDS	44	37	1.1	SOLUTION GAS DRIVE	WATERFLOOD IN: GLEN EWEN UNIT	4 SE LSD. IN 1/4 SECTION	
GOLDEN LAKE NORTH SPARKY SAND	23	20	2.2	SOLUTION GAS DRIVE	WATERFLOOD IN: GOLDEN LAKE VOLUNTARY UNIT (SUSPENDED)	1 SE 1/4 OF LSD. EXCEPT: TWP 48, RGE 23, SEC: 19, 29, 30, E1/2-8 SW1/4-31, 32. TWP 48, RGE 24, SEC: NE1/4-24, SE1/4-25. WHERE: 1 SW 1/4 OF LSD.	
GOLDEN LAKE NORTH WASECA SAND	95	87	2.2	SOLUTION GAS DRIVE		1 SE 1/4 OF LSD.	
GOLDEN LAKE SOUTH SPARKY SAND	71	62	2.9	SOLUTION GAS DRIVE	PILOT IN-SITU WET COMBUSTION	1 SE 1/4 OF LSD.	
GOLDEN LAKE SOUTH WASECA SAND	121	108	2.7	SOLUTION GAS DRIVE	TWO IN-SITU WET COMBUSTION PILOT PROJECTS (OXYGEN ENRICHED)	1 SE 1/4 OF LSD.	
GRIFFIN FROBISHER BEDS	7	7	0.5	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
GULL LAKE BASAL CANTUAR SAND	21	8	6.6	SOLUTION GAS DRIVE	WATERFLOOD IN: (1) JOHNSTON UNIT (2) GULL LAKE CANTUAR VOLUNTARY UNIT NO. 1	1 SE 1/4 OF LSD.	
GULL LAKE CENTRAL UPPERSHAUNAVON	24	16	2.5	SOLUTION GAS DRIVE	WATERFLOOD IN: GULL LAKE UPPER SHAUNAVON VOLUNTARY UNIT NO. 1	2 SE 1/4 OF EVEN LSDS.	
GULL LAKE NORTH UPPER SHAUNAVON	36	26	4.9	SOLUTION GAS DRIVE	WATERFLOOD IN: GULL LAKE NORTH SHAUNAVON UNIT	1 SE 1/4 OF LSD.	
GULL LAKE SOUTH UPPER SHAUNAVON	12	9	1.2	SOLUTION GAS DRIVE	NONE	4 SW LSD. OF 1/4 SECTION EXCEPT: TWP 12, RGE 19, SEC: N1/2-14, N1/2-15 NE1/4-21, 22, 23, N1/2-24, SW1/4-26, S1/2-27, SE1/4-28. WHERE: 4 NE LSD. OF 1/4 SECTION	
GULLY LAKE WASECA SAND	98	78	3.8	SOLUTION GAS DRIVE	WATERFLOOD IN: GULLY LAKE WASECA VOLUNTARY UNIT	1 SE 1/4 OF LSD.	
HANDSWORTH ALIDA BEDS	25	21	1.3	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
HARTAVEN FROBISHER-ALIDA BEDS	6	6	3.7	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
HASTINGS EAST FROBISHER BEDS	21	19	3.7	SOLUTION GAS DRIVE PARTIAL WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
HASTINGS FROBISHER BEDS	135	122	1.9	SOLUTION GAS DRIVE WATER DRIVE	WATERFLOOD IN: (1) HASTINGS FROBISHER UNIT (2) HASTINGS VOLUNTARY UNIT NO. 1 (3) HASTINGS VOLUNTARY UNIT NO. 2	2 EVEN NUMBERED LSDS. EXCEPT: (A) TWP 3, RGE 1, SEC: 25, 36. WHERE: 2 ODD NUMBERED LSDS. (B) TWP 4, RGE 34, SEC: NW1/4-14, N1/2-15, 16, SW1/4-21, S1/2-24, NE1/4-22, LSDS: 14-23. TWP 4, RGE 1, SEC: LSDS: 7-8, 11-12, LSDS: 11 & 12, NE1/4-12-13, LSDS: 7-8-14, SE1/4-24. WHERE: 1 CENTRE OF LSD.	
HAZELWOOD TILSTON BEDS	4	4	2.4	WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
HAZLET ROSEY SAND	6	3	5.3	SOLUTION GAS DRIVE	NONE	2 EVEN NUMBERED LSDS.	
HEARTS HILL BAKKEN SAND	9	7	2.8	SOLUTION GAS DRIVE	NONE	1 CENTRE OF LSD.	
HOFFER RATCLIFFE LOWER BEDS	3	3	3.7	SOLUTION GAS DRIVE	NONE	4 SE LSD. OF 1/4 SECTION EXCEPT: TWP 1, RGE 15, SEC: 28, 29, S1/2-32, S1/2-33. WHERE: 4 SW LSD. OF 1/4 SECTION	

POOL NAME	PRODUCTION			NATURAL DEPLETION MECHANISM	ENHANCED RECOVERY	SPACING REGULATIONS*	
	WELLS CAPABLE	WELLS ON	DAILY M ³ /WELL			DRAINAGE UNITS (LSDS)	TARGET AREA
HOFFER RATCLIFFE UPPER BEDS	9	9	2.5	SOLUTION GAS DRIVE	NONE	4 SE LSD. OF 1/4 SECTION EXCEPT: TWP 1, RGE 15, SEC: 28,29,31/2-32, 31/2-33. WHERE: 4 SW LSD. OF 1/4 SECTION 1 CENTRE OF LSD.	
HOOSIER BAKKEN SAND	35	21	4.4	SOLUTION GAS DRIVE GAS CAP DRIVE	WATERFLOOD IN: HOOSIER BAKKEN SAND VOLUNTARY UNIT NO. 1	4 NW LSD OF 1/4 SECTION. 4 NW LSD. OF 1/4 SECTION EXCEPT: TWP 7, RGE 12, SEC: 31,31/2-32. TWP 8, RGE 12, SEC: N1/2-3,SE1/4-4, S1/2-5,S1/2-6. WHERE: 2 ODD NUMBERED LSDS. 2 ODD NUMBERED LSDS. 2 ODD NUMBERED LSDS.	
HUME FROBISHER BEDS	7	6	2.5	PROBABLE WATER DRIVE	NONE		
HUME MIDALE BEDS	20	17	1.0	SOLUTION GAS DRIVE	NONE		
HUMMINGBIRD BIRDBEAR	5	4	8.0	WATER DRIVE	NONE		
HUMMINGBIRD RATCLIFFE BEDS	9	9	4.9	SOLUTION GAS DRIVE	WATERFLOOD IN: HUMMINGBIRD RATCLIFFE VOLUNTARY UNIT NO. 1		
HUNTOON FROBISHER BEDS	28	20	1.8	WATER DRIVE	NONE	4 SE LSD. IN 1/4 SECTION EXCEPT: TWP 6, RGE 9, SEC: N1/2-30,31,32,33, 34. TWP 7, RGE 9, SEC: 3,4,E1/2-5,10. TWP 6, RGE 10, SEC: N1/2-25,NE1/4-26 E1/2-33,34,35,36. TWP 7, RGE 10, SEC: 4. WHERE: 2 ODD NUMBERED LSDS.	
HUNTOON MIDALE BEDS	39	38	1.1	SOLUTION GAS DRIVE	WATERFLOOD IN: HUNTOON MIDALE BEDS VOLUNTARY UNIT NO. 1	4 SE LSD. IN 1/4 SECTION EXCEPT: (SEE HUNTOON FROBISHER BEDS POOL)	
ILLERBRUN UPPER SHAUNAVON	8	6	12.1	SOLUTION GAS DRIVE	WATERFLOOD IN: ILLERBRUN VOLUNTARY UNIT	4 SE LSD. IN 1/4 SECTION	
INGOLDSBY FROBISHER-ALIDA BEDS	80	79	2.4	WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
INNES FROBISHER BEDS	55	52	2.8	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
INSTON UPPER SHAUNAVON	58	51	8.8	SOLUTION GAS DRIVE	WATERFLOOD IN: INSTON UNIT	4 SE LSD. IN 1/4 SECTION	
JAVA CANTUAR SAND	5	2	1.2	SOLUTION GAS DRIVE	WATERFLOOD	2 ODD NUMBERED LSDS.	
JOHNSTON UPPER SHAUNAVON	1	1	2.3	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
KENOSEE TILSTON BEDS	35	27	6.3	WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
KERROBERT VIKING SAND	68	65	1.9	SOLUTION GAS DRIVE	NONE	1 CENTRE OF LSD.	
KISBEY BIRDBEAR	8	6	4.8	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
LAKE ALMA RATCLIFFE BEDS	5	5	15.5	SOLUTION GAS DRIVE	WATERFLOOD IN: LAKE ALMA VOLUNTARY UNIT	4 SW LSD. IN 1/4 SECTION	
LANDROSE MCLAREN SAND	5	1	0.1	SOLUTION GAS DRIVE	NONE	1/2 NE & SW 1/4 OF LSD.	
LANDROSE WASECA SAND	7	2	2.0	SOLUTION GAS DRIVE	NONE	1/2 NE & SW 1/4 OF LSD.	
LASHBURN SOUTH SPARKY SAND	6	6	1.4	SOLUTION GAS DRIVE	NONE	1 SW 1/4 OF LSD. EXCEPT: TWP 48, RGE 23, SEC: 18. TWP 48, RGE 24, SEC: NW1/4-14, NE1/4-15,E1/2-22,23. WHERE: 1 SE 1/4 OF LSD.	
LASHBURN SOUTH WASECA SAND	33	22	2.2	SOLUTION GAS DRIVE	NONE	1 SW 1/4 OF LSD. EXCEPT: -SEE LASHBURN SOUTH SPARKY SAND POOL	
LASHBURN WASECA SAND	71	51	2.4	SOLUTION GAS DRIVE	WATERFLOOD IN: LASHBURN WASECA VOLUNTARY UNIT (SUSPENDED)	1 SW 1/4 OF LSD.	
LASHBURN WEST SPARKY SAND	31	11	1.4	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
LEITCHVILLE SHAUNAVON	31	27	2.3	SOLUTION GAS DRIVE	WATERFLOOD IN: LEITCHVILLE SHAUNAVON VOLUNTARY UNIT	4 SW LSD OF 1/4 SECTION EXCEPT: TWP 8, RGE 18, SEC: N1/2-31,N1/2-32, NW1/4-33 TWP 9, RGE 18 SEC: W1/2-4,5,6,7,8, 9,10,S1/2-15,S1/2-22,NW1/4-16,17,18. WHERE: 4 NE LSD OF 1/4 SECTION.	
LEON LAKE SHAUNAVON	16	14	1.6	SOLUTION GAS DRIVE	PILOT WATERFLOOD	4 SE LSD. IN 1/4 SECTION	
LIGHTNING TILSTON BEDS	1	1	5.0	WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
LLOYDMINSTER SPARKY SAND	15	12	2.5	SOLUTION GAS DRIVE	NONE	1/2 NW & SE 1/4 OF LSD. EXCEPT: SPECIAL PROVISIONS FOR PART LSDS.	
LONE ROCK SPARKY SAND	63	33	1.0	SOLUTION GAS DRIVE	PILOT STEAMFLOOD	1/4 CENTRE OF EACH 1/4 LSD.	

POOL NAME	PRODUCTION					SPACING REGULATIONS*	
	WELLS CAPABLE	WELLS ON	DAILY M3/WELL	NATURAL DEPLETION MECHANISM	ENHANCED RECOVERY	DRAINAGE UNITS (LSDS)	TARGET AREA
LOST HORSE HILL FROBISHER-ALIDA	46	46	3.7	WATER DRIVE	NONE	2 ODD NUMBERED LSDS. EXCEPT: TWP 10, RGE 8, SEC: 11, 12, SW1/4-13, S1/2-14, SE1/4-15. WHERE: 1 CENTRE OF LSD.	
LOUGHEED MIDALE BEDS	18	18	2.6	SOLUTION GAS DRIVE	NONE	2 ODD NUMBERED LSDS. EXCEPT: TWP 6, RGE 14, SEC: N1/2-20, 29, 32. WHERE: 2 EVEN NUMBERED LSDS. 1 CENTRE OF LSD.	
LOVERNA DETRITAL	10	6	1.6	SOLUTION GAS DRIVE	NONE	1 CENTRE OF LSD.	
LOW LAKE WASECA SAND	8	6	0.9	SOLUTION GAS DRIVE	NONE	1/2 NE & SW 1/4 OF LSD.	
LUCKY HILLS VIKING	25	18	0.8	SOLUTION GAS DRIVE GAS CAP DRIVE	NONE	2 EVEN NUMBERED LSDS.	
LUSELAND BAKKEN SAND	40	34	2.8	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
MACKLIN SPARKY SAND	58	35	2.3	SOLUTION GAS DRIVE	NONE	1 CENTRE OF LSD.	
MACOUN MIDALE BEDS	15	14	2.9	PARTIAL WATER DRIVE	NONE	4 NW LSD. IN 1/4 SECTION	
MACOUN WEST MIDALE BEDS	5	4	3.3	PROBABLE WATER DRIVE	NONE	4 NW LSD OF 1/4 SECTION.	
MAIDSTONE MCLAREN SAND	51	46	1.9	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
MAIDSTONE WASECA SAND	34	13	1.8	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
MAIN SUCCESS ROSEMARY SAND	28	12	2.5	SOLUTION GAS DRIVE	WATERFLOOD IN: SUCCESS MAIN UNIT	1 SW 1/4 OF LSD.	
MARSDEN SOUTH SPARKY SAND	20	28	6.5	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
MARSDEN SPARKY SAND	12	9	2.1	SOLUTION GAS DRIVE	NONE	1/4 CENTRE OF EACH 1/4 LSD.	
MELROSE FROBISHER-ALIDA BEDS	6	4	1.9	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
MIDALE CENTRAL FROBISHER BEDS	14	12	2.2	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
MIDALE CENTRAL MIDALE BEDS	409	369	2.3	SOLUTION GAS DRIVE	WATERFLOOD IN: MIDALE UNIT PILOT CARBON DIOXIDE FLOOD IN MIDALE UNIT	2 ODD NUMBERED LSDS.	
MINARD MIDALE BEDS	2	2	1.5	SOLUTION GAS DRIVE	NONE	4 NW LSD OF 1/4 SECTION.	
MOOSE MOUNTAIN TILSTON BEDS	19	19	3.7	WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
MOOSE VALLEY TILSTON BEDS	4	4	3.1	WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
MORRISVIEW FROBISHER-ALIDA BEDS	6	6	2.1	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
NEILBURG MCLAREN SAND	68	50	4.3	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
NEPTUNE RATCLIFFE BEDS	17	16	3.0	SOLUTION GAS DRIVE	NONE	4 CENTRE OF EACH 1/4 SECTION	
NORTH ANTIER MIDALE BEDS	4	3	1.2	SOLUTION GAS DRIVE	WATERFLOOD IN: ANTLER VOLUNTARY UNIT NO. 1	2 ODD NUMBERED LSDS.	
NORTHGATE FROBISHER BEDS	1	1	1.0	PROBABLE WATER DRIVE	NONE	4 SE LSD. IN 1/4 SECTION	
NORTHGATE MIDALE BEDS	23	22	0.7	SOLUTION GAS DRIVE	WATERFLOOD IN: NORTHGATE MIDALE VOLUNTARY UNIT	2 ODD NUMBERED LSDS.	
NORTH HANDSWORTH ALIDA BEDS	23	23	1.7	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
NORTH HOOSIER BAKKEN SAND	37	31	4.6	POSSIBLE WATER DRIVE	WATERFLOOD IN: NORTH HOOSIER BAKKEN SAND VOLUNTARY UNIT	1 CENTRE OF LSD.	
NORTH HOOSIER BASAL BLAIRMORE	16	16	4.6	SOLUTION GAS DRIVE PARTIAL WATER DRIVE	WATERFLOOD IN: NORTH HOOSIER BASAL BLAIRMORE VOLUNTARY UNIT	1/2 SW & NE 1/4 OF LSDS.	
NORTHMINSTER SPARKY SAND	48	43	1.6	SOLUTION GAS DRIVE	WATERFLOOD IN: NORTHMINSTER SPARKY VOLUNTARY UNIT (SUSPENDED)	1 SW 1/4 OF LSD. EXCEPT: TWP 50, RGE 27, SEC: NW1/4-2, 11, LSDS. 12, 13, 14, 15 & 16-12, S1/2 & NW1/4-13 14. WHERE: 1 SE 1/4 OF LSD. 1 SE 1/4 OF LSD. 1 SE 1/4 OF LSD. 1 SW 1/4 OF LSD.	
NORTHMINSTER NORTH G.P. SAND	7	2	1.2	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
NORTHMINSTER NORTH SPARKY SAND	20	15	1.5	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
NORTH PREMIER ROSEMARY SAND	30	22	7.2	SOLUTION GAS DRIVE	WATERFLOOD IN: (1) NORTH PREMIER UNIT NO. 1 (2) NORTH PREMIER UNIT NO. 4	1 SW 1/4 OF LSD.	
NORTH PREMIER UPPER SHAUNAVON	36	30	1.6	SOLUTION GAS DRIVE	WATERFLOOD IN: (1) NORTH PREMIER UPPER SHAUNAVON VOLUNTARY UNIT (2) NORTH PREMIER UNIT NO. 4	1 SW 1/4 OF LSD. EXCEPT: TWP 14, RGE 19, SEC: 26, E1/2-27, 34, 35. WHERE: 2 SW 1/4 OF ODD LSDS. 2 EVEN NUMBERED LSDS. 2 EVEN NUMBERED LSDS. 2 ODD NUMBERED LSDS.	
NOTTINGHAM ALIDA BEDS	43	41	2.7	WATER DRIVE	NONE		
OAKLEY FROBISHER BEDS	5	4	1.0	WATER DRIVE	NONE		
OUNGRE RATCLIFFE BEDS	59	55	2.7	SOLUTION GAS DRIVE	WATERFLOOD IN: OUNGRE VOLUNTARY UNIT NO. 1		

POOL NAME	PRODUCTION			NATURAL DEPLETION MECHANISM	ENHANCED RECOVERY	SPACING REGULATIONS*	
	WELLS CAPABLE	WELLS ON	DAILY M3/WELL			DRAINAGE UNITS (LSDS)	TARGET AREA
PARKMAN SOURIS VALLEY BEDS	19	17	1.7	WATER DRIVE	NONE	2	EVEN NUMBERED LSDS.
PARKMAN TILSTON BEDS	6	6	3.0	WATER DRIVE	NONE	2	EVEN NUMBERED LSDS.
PARKMAN TILSTON-SOURIS VALLEY	151	144	2.4	WATER DRIVE	NONE	1	CENTRE OF LSD.
PARKMAN SOUTH TILSTON-S. VALLEY	5	5	2.5	WATER DRIVE	NONE	2	EVEN NUMBERED LSDS.
PENMANT UPPER SHAUNAVON	7	6	1.8	SOLUTION GAS DRIVE	NONE	2	EVEN NUMBERED LSDS.
PIKES PEAK G.P. SAND	14	9	5.2	SOLUTION GAS DRIVE	NONE	1	SE 1/4 OF LSD.
PIKES PEAK SPARKY SAND	8	2	1.6	SOLUTION GAS DRIVE	NONE	1	SE 1/4 OF LSD.
PIKES PEAK WASECA SAND	72	59	14.9	SOLUTION GAS DRIVE	CYCLIC STEAM STIMULATION	1	SE 1/4 OF LSD.
PINTO FROBISHER BEDS	14	12	3.0	WATER DRIVE	NONE	2	EVEN NUMBERED LSDS.
						EXCEPT: (A)TWP 1, RGE 4, SEC: W1/2-18, NE1/4-29, 30, S1/2-28, NW1/4-31, 32, 33. TWP 1, RGE 5, SEC: 1 TO 4, 8 TO 17, 20 TO 29, ALL INCLUSIVE, E1/2-36. WHERE: 4 NE LSD. IN 1/4 SECTION (B)TWP 2, RGE 4, SEC: N1/2-21, N1/2-22, 26, 27, 34, 35. WHERE: 4 SW LSD. IN 1/4 SECTION	
PINTO MIDALE BEDS	64	54	1.2	SOLUTION GAS DRIVE	WATERFLOOD IN: SOUTH PINTO UNIT	2	EVEN NUMBERED LSDS.
						EXCEPT: (SEE PINTO FROBISHER BEDS POOL)	
PLATO NORTH VIKING	79	79	1.5	SOLUTION GAS DRIVE	NONE	1	CENTRE OF LSD.
PLATO VIKING	51	23	0.6	SOLUTION GAS DRIVE	WATERFLOOD IN: PLATO VIKING VOLUNTARY UNIT NO. 1	1	CENTRE OF LSD.
PLOVER LAKE BAKKEN SAND	36	31	3.1	SOLUTION GAS DRIVE	NONE	1	CENTRE OF LSD.
QUEENSDALE EAST FROBISHER-ALIDA	89	85	4.9	WATER DRIVE	NONE	1	CENTRE OF LSD.
QUEENSDALE NORTH ALIDA BEDS	10	10	1.6	WATER DRIVE	NONE	1	CENTRE OF LSD.
QUEENSDALE WEST ALIDA BEDS	16	16	2.3	WATER DRIVE	NONE	1	CENTRE OF LSD.
RALPH MIDALE BEDS	25	22	0.8	SOLUTION GAS DRIVE	NONE	2	ODD NUMBERED LSDS.
RAPDAN UPPER SHAUNAVON	45	42	5.4	SOLUTION GAS DRIVE	WATERFLOOD IN: (1)RAPDAN UNIT (2)NORTH RAPDAN UPPER SHAUNAVON VOLUNTARY UNIT (3)RAPDAN UPPER SHAUNAVON VOLUNTARY UNIT NO. 2 PILOT POLYMER FLOOD IN: RAPDAN UNIT	4	SW LSD. IN 1/4 SECTION
						EXCEPT: (A)TWP 3, RGE 20, SEC: NE1/4-32, NW1/4-33. TWP 4, RGE 20, SEC: W1/2-4, E1/2-5, E1/2-8, W1/2-9, SW1/4-16, SE1/4-17. WHERE: 4 NE LSD. IN 1/4 SECTION (B)TWP 4, RGE 20, SEC: NW1/4-36. TWP 5, RGE 19, SEC: 6, SE1/4-7. TWP 5, RGE 20, SEC: E1/2-1. WHERE: 2 EVEN NUMBERED LSDS.	
RAPDAN WEST SHAUNAVON	15	15	2.0	SOLUTION GAS DRIVE	NONE	4	NE LSD. IN 1/4 SECTION
ROCANVILLE BAKKEN SAND	8	8	3.1	PARTIAL WATER DRIVE	NONE	1	CENTRE OF LSD.
RONCOTT BAKKEN SAND	6	5	1.3	POSSIBLE WATER DRIVE	NONE	2	ODD NUMBERED LSDS.
ROSEBANK ALIDA BEDS	62	55	3.5	WATER DRIVE	NONE	2	EVEN NUMBERED LSDS.
ROSEBANK SOUTH ALIDA BEDS	11	11	2.7	WATER DRIVE	NONE	2	EVEN NUMBERED LSDS.
RUSH LAKE SPARKY SAND	13	12	1.4	SOLUTION GAS DRIVE	NONE	1	SE 1/4 OF LSD.
RUSH LAKE WASECA SAND	12	7	2.2	SOLUTION GAS DRIVE	NONE	1	SE 1/4 OF LSD.
SENLAC LLOYDMINSTER SAND	83	76	4.0	SOLUTION GAS DRIVE	NONE	1	SE 1/4 OF LSD.
SHERWOOD FROBISHER BEDS	17	15	6.6	WATER DRIVE	NONE	2	ODD NUMBERED LSDS.
SILVERDALE SPARKY SAND	92	47	1.2	SOLUTION GAS DRIVE	PILOT WATER ALTERNATING GAS INJECTION	1/4	CENTRE OF EACH 1/4 LSD.
						EXCEPT: TWP 48, RGE 28, SEC: LSDS. 1, 8, 9, & 16-27. LSDS. 1, 8, 9 & 16-34. TWP 49, RGE 27, SEC: N1/2-6. TWP 49, RGE 28, SEC: LSDS. 1, 8, 9 & 16-3. LSDS. 1, 8, 9 & 16-10, LSDS. 1, 8, 9 & 16-15. WHERE: SPECIAL PROVISIONS FOR PART SECTIONS	
SILVERTON FROBISHER BEDS	3	3	1.6	WATER DRIVE	NONE	2	EVEN NUMBERED LSDS.
SKINNER LAKE RATCLIFFE BEDS	16	15	3.8	SOLUTION GAS DRIVE	NONE	4	NW LSD. IN 1/4 SECTION
SMILEY-DEWAR VIKING	200	182	1.3	SOLUTION GAS DRIVE	WATERFLOOD	1	CENTRE OF LSD.
SOURIS FLAT FROBISHER BEDS	22	18	2.3	WATER DRIVE	NONE	2	ODD NUMBERED LSDS.
SOUTH FLETHODE TILSTON BEDS	12	11	2.9	WATER DRIVE	NONE	2	EVEN NUMBERED LSDS.
SOUTH SUCCESS ROSEMARY SAND	40	33	6.2	SOLUTION GAS DRIVE PARTIAL WATER DRIVE	WATERFLOOD IN: SUCCESS UNIT	1	SW 1/4 OF LSD.

POOL NAME	PRODUCTION			NATURAL DEPLETION MECHANISM	ENHANCED RECOVERY	SPACING REGULATIONS*	
	WELLS CAPABLE	WELLS ON	DAILY M3/WELL			DRAINAGE UNITS (LSDS)	TARGET AREA
STANDARD HILL WASECA SAND	95	75	3.7	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
STAR VALLEY FROBISHER-ALIDA BEDS	40	39	6.2	WATER DRIVE	NONE	1 CENTRE OF LSD.	
STEELMAN FROBISHER BEDS	43	40	1.8	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
STEELMAN MIDALE BEDS	623	586	2.7	SOLUTION GAS DRIVE	WATERFLOOD IN: (1)STEELMAN UNIT NO. 1A (2)STEELMAN UNIT NO. 2 (3)STEELMAN UNIT NO. 3 (4)STEELMAN UNIT NO. 4 (5)STEELMAN UNIT NO. 5 (6)STEELMAN UNIT NO. 6 (7)STEELMAN UNIT NO. 7 (8)LAMPHAN UNIT (9)DOUGLSTON MIDALE BEDS UNIT (10)STEELMAN NORTH VOLUNTARY UNIT NO. 1	2 ODD NUMBERED LSDS.	
STORTHOKS ALIDA-TILSTON BEDS	20	18	2.2	WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
STOUGHTON FROBISHER-ALIDA BEDS	11	10	1.9	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
STOUGHTON SOUTH FROBISHER BEDS	16	13	1.5	PROBABLE WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
SUCCESS NORTH ROSERAY SAND	9	9	7.2	SOLUTION GAS DRIVE	WATERFLOOD IN: SUCCESS NORTH ROSERAY VOLUNTARY UNIT	2 EVEN NUMBERED LSDS.	
SUCCESS ROSERAY SAND ALPHA	6	6	3.4	SOLUTION GAS DRIVE	WATERFLOOD IN: SUCCESS ALPHA UNIT	1 SW 1/4 OF LSD.	
SUFFIELD ROSERAY SAND	23	20	11.6	SOLUTION GAS DRIVE	WATERFLOOD IN: (1)SUFFIELD UNIT NO. 1 (2)SUFFIELD UNIT NO. 3	2 ODD NUMBERED LSDS. EXCEPT: TWP 18, RGE 19, SEC: 17, E1/2NW1/4- 18, S1/2-19, S1/2-20. WHERE:	
SUFFIELD UPPER SHAUNAVON	22	20	4.0	SOLUTION GAS DRIVE	WATERFLOOD IN: (1)SUFFIELD UNIT NO. 2 (2)SUFFIELD UNIT NO. 3	1 CENTRE OF LSD.	
TANGLEFLAGS EAST MCLAREN SAND	15	8	2.2	SOLUTION GAS DRIVE	NONE	2 ODD NUMBERED LSDS.	
TANGLEFLAGS G.P. SAND	123	108	3.2	SOLUTION GAS DRIVE	PILOT IN-SITU WET COMBUSTION	1 SE 1/4 OF LSD.	
TANGLEFLAGS LLOYDMINSTER SAND	207	191	1.6	SOLUTION GAS DRIVE	WATERFLOOD IN: TANGLEFLAGS VOLUNTARY UNIT NO. 2	1 SE 1/4 OF LSD.	
TANGLEFLAGS MAHNVILLE SANDS	24	16	2.6	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
TANGLEFLAGS NORTH CUMMINGS	14	5	3.9	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
TANGLEFLAGS NORTH G.P. SAND	13	5	0.8	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
TANGLEFLAGS NORTH LLOYD. SAND	53	34	3.1	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
TANGLEFLAGS SPARKY SAND	42	33	2.7	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
TANGLEFLAGS WEST G.P. SAND	5	2	1.0	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
TANGLEFLAGS WEST LLOYD. SAND	18	16	1.6	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
TANGLEFLAGS WEST SPARKY SAND	10	8	2.4	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
TATAGWA MIDALE BEDS	35	33	5.7	PROBABLE WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
VERLO ROSERAY SAND	12	12	19.3	SOLUTION GAS DRIVE	WATERFLOOD IN: VERLO ROSERAY SAND UNIT	2 EVEN NUMBERED LSDS.	
VIEWFIELD FROBISHER BEDS	56	50	5.2	SOLUTION GAS DRIVE PARTIAL WATER DRIVE	NONE	1 CENTRE OF LSD.	
VIEW HILL MIDALE BEDS	4	4	2.2	WATER DRIVE	NONE	4 NW LSD. IN 1/4 SECTION	
WAPELLA SAND	44	40	4.1	WATER DRIVE	NONE	1 CENTRE OF LSD.	
WARMLEY ALIDA BEDS	3	3	4.6	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
WAUCHOPE TILSTON BEDS	10	10	9.6	WATER DRIVE	NONE	2 EVEN NUMBERED LSDS.	
WEIR HILL FROBISHER BEDS	2	2	2.5	PROBABLE WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
WEST INNES FROBISHER BEDS	5	4	1.4	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
WEST KINGSFORD MIDALE BEDS	26	25	1.7	WATER DRIVE	NONE	2 ODD NUMBERED LSDS.	
WESTHAZEL G.P. SAND	16	14	3.2	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
WESTHAZEL SPARKY SAND	33	26	2.2	SOLUTION GAS DRIVE	NONE	1 SE 1/4 OF LSD.	
WEYBURN FROBISHER BEDS	20	17	3.3	WATER DRIVE	NONE	2 EVEN NUMBERED LSDS. EXCEPT: TWP 6, RGE 11, SEC: W1/2-31. TWP 7, RGE 11, SEC: 6, 7. TWP 5, RGE 12, SEC: NW1/4-35. TWP 6, RGE 12, SEC: LSDS. 13&14-1, NE1/4&W1/2&LSDS. 7&8-2, 11, W1/2-12, 13, 14, NE1/4-22, 23, 24, 25, 26, 27, 33, 34, 35, 36. TWP 7, RGE 12, SEC: 1, S1/2&NE1/4-2, S1/2-3, SE1/4-4, E1/2-11, 12. WHERE:	

POOL NAME	PRODUCTION			NATURAL DEPLETION MECHANISM	ENHANCED RECOVERY	SPACING REGULATIONS*	
	WELLS CAPABLE	WELLS ON	DAILY M3/WELL			DRAINAGE UNITS (LSDS)	TARGET AREA
WEYBURN MIDALE BEDS	633	595	3.6	SOLUTION GAS DRIVE	WATERFLOOD IN: WEYBURN UNIT	2 EXCEPT: TWP 6, RGE 11, SEC: W1/2-31. TWP 7, RGE 11, SEC: 6,7. TWP 5, RGE 12, SEC: LSDS. 11&12-35. TWP 6, RGE 12, SEC: LSDS. 13&14-12, 13, LSDS. 9, 10, 13&14-14, NE1/4-22, 23, 24, 25, LSDS. 3&4&E1/2-26, LSDS. 5, 6, 7&8 &N1/2-33, NE1/4-34, E1/2&NW1/4-35, 36. TWP 7, RGE 12, SEC: 1, S1/2&NE1/4-2, S1/2-3, SE1/4-4, E1/2-11, 12. WHERE:	2 EVEN NUMBERED LSDS.
WEYBURN NORTH FROBISHER BEDS	9	9	2.4	WATER DRIVE	NONE	2	ODD NUMBERED LSDS.
WEYBURN NORTH MIDALE BEDS	18	16	1.2	SOLUTION GAS DRIVE	NONE	2	ODD NUMBERED LSDS.
WHITE BEAR TILSTON BEDS	13	13	5.3	WATER DRIVE	NONE	1	CENTRE OF LSD.
WHITE BEAR TILSTON-SOURIS VALLEY	5	4	1.1	WATER DRIVE	NONE	1	CENTRE OF LSD.
WHITEMUD UPPER SHAUNAVON	5	5	0.7	SOLUTION GAS DRIVE	NONE	4	NE LSD. IN 1/4 SECTION
WHITESIDE VIKING SAND	56	52	1.2	SOLUTION GAS DRIVE	WATERFLOOD IN: WHITESIDE UNIT (SUSPENDED)	1	CENTRE OF LSD.
WILDWOOD ALIDA BEDS	6	6	2.6	WATER DRIVE	NONE	2	EVEN NUMBERED LSDS.
WILLMAR FROBISHER-ALIDA BEDS	118	102	3.1	WATER DRIVE SOLUTION GAS DRIVE PARTIAL WATER DRIVE	WATERFLOOD IN: (1)WILLMAR FROBISHER-ALIDA VOLUNTARY UNIT NO. 1 (2)NORTH DALESBORO UNIT NO. 1 (3)NORTH CENTRAL WILLMAR VOLUNTARY UNIT	2	EVEN NUMBERED LSDS.
WINMORE FROBISHER BEDS	5	2	0.6	SOLUTION GAS DRIVE PARTIAL WATER DRIVE	NONE	2	ODD NUMBERED LSDS.
WINTER CUMMINGS SAND	13	13	0.8	SOLUTION GAS DRIVE	NONE	1	CENTRE OF LSD.
WORKMAN FROBISHER BEDS	99	94	2.4	SOLUTION GAS DRIVE WATER DRIVE	WATERFLOOD IN: WORKMAN FROBISHER VOLUNTARY UNIT NO. 1	2	ODD NUMBERED LSDS.
WORKMAN MIDALE BEDS	28	18	1.2	SOLUTION GAS DRIVE	WATERFLOOD IN: (1)WORKMAN MIDALE VOLUNTARY UNIT NO. 1 (2)WORKMAN MIDALE VOLUNTARY UNIT NO. 2	2	ODD NUMBERED LSDS.

*Spacing Regulations in effect on April 1, 1985.

GAS POOLS

POOL NAME	WELLS CAPABLE OF PROD.	NO. OF WELLS PRODUCING	AVE. PROD. 10 ³ m ³ /DAY/WELL (PEAK PROD.)	SPACING REGULATIONS (IN EFFECT ON APRIL 1, 1985)
BAYHURST VIKING GAS POOL	4	4	120.4	1 section drainage units
BAYHURST WEST VIKING GAS POOL	3	1	26.9	1 section drainage units
BEACON HILL MANNVILLE SAND GAS POOL	22	11	14.8	1 section drainage units
BEACON HILL WEST MANNVILLE SAND GAS POOL	6	6	37.6	1 section drainage units
BEVERLEY EAST CANTUAR GAS POOL	3	2	16.7	1 section drainage units
BIGSTICK SECOND WHITE SPECKS GAS POOL	23	23	13.7	1 section drainage units
BROCK EAST VIKING GAS POOL	3	3	1.7	1 section drainage units
BROCK VIKING SAND GAS POOL	6	2	6.9	1 section drainage units
BURSTALL MEDICINE HAT GAS POOL	6	6	1.3	1/4 section drainage units
BURSTALL MILK RIVER GAS POOL	5	5	1.8	1/4 section drainage units
BURSTALL MILK RIVER MEDICINE HAT GAS POOL	37	37	2.1	1/4 section drainage units
CAVALIER SPINNEY HILL SAND GAS POOL	3	3	21.2	1 section drainage units
COLEVILLE-SMILEY VIKING SAND GAS POOL	40	34	7.7	1 section drainage units
DODSLAND NORTH VIKING GAS POOL	27	27	5.7	1 section drainage units
FORT PITT MANNVILLE SAND GAS POOL	3	2	36.0	1 section drainage units
FORT PITT NORTH MANNVILLE SAND GAS POOL	3	3	42.0	1 section drainage units
GLIDDEN VIKING GAS POOL	3	2	8.4	1 section drainage units
GREENAN VIKING GAS POOL	15	12	2.9	1 section drainage units
GULL LAKE CANTUAR GAS POOL	6	1	3.4	1 section drainage units
HATTON MEDICINE HAT SAND GAS POOL	369	354	2.3	1 section drainage units, except: (a) twp 13, rge 26, sec. 1-10, 15-22 & 27-34 incl.; twp 14, rge 26, sec. 18; twp 13, rge 27, sec. 1-3, 10-15, 22-27 & 34-36 incl.; twp 14, rge 27, sec. 1-4 & 8-36 incl.; twp 14, rge 28, sec. 24; twp 15, rge 28, sec. 25-28 & 31-36 incl.; twp 16, rge 28, sec. 1-12 & 15-21 incl.; twp 17, rge 28, sec. 13 & 14; twp 15, rge 29, sec. 26, 35 & 36; twp 16, rge 29, sec. 1-24 incl. & 27; twp 17, rge 29, sec. 3, 23, 29 & 31; twp 18, rge 29, sec. 5-36 incl.; where drainage units are 1/2 section. (b) twp 16, rge 24, sec. 16, 21, 28, 31-33 incl.; twp 17, rge 24, sec. 4-9, 15-22 & 27-34 incl.; twp 16, rge 25, sec. 19-23 & 25-36 incl.; twp 17, rge 25, sec. 1-36 incl.; twp 15, rge 26, sec. 1-36 incl.; twp 16, rge 26, sec. 1-36 incl.; twp 17, rge 26, sec. 1-36 incl.; twp 15, rge 27, sec. 1-3, 9-16, & 19-36 incl.; twp 14, rge 28, sec. 2-23 & 25-36 incl.; twp 15, rge 28, sec. 1-24 incl. & 29 & 30; twp 16, rge 28, sec. 13, 14, & 22-36 incl.; twp 17, rge 28, sec. 1-12 & 15-18 incl.; twp 14, rge 29, sec. 1, 2, 11-15 & 22-36 incl.; twp 15, rge 29, sec. 1-25 & 27-34 incl.; twp 16, rge 29, sec. 28-32 incl.; twp 14, rge 30, sec. 25 & 36; where drainage units are 1/4 section.*
HATTON MILK RIVER GAS POOL	485	467	4.1	1 section drainage units, except: (a) twp 13, rge 25, sec. 1-3, 10-16, 21-28, & 33-36 incl.; twp 13, rge 26, sec. 1-10, 15-22, & 27-34 incl.; twp 14, rge 26, sec. 18; twp 13, rge 27, sec. 1-3, 10-15, 22-27, 31, 33-36 incl.; twp 14, rge 27, sec. 1-4 & 8-36 incl.; twp 14, rge 28, sec. 24; where drainage units 1/2 section. (b) twp 16, rge 24, sec. 16, 21, 28, 31, 32 & 33; twp 17, rge 24, sec. 4-9, 15-22 & 27-34 incl.; twp 16, rge 25, sec. 19-23 & 25-36 incl.; twp 17, rge 25, sec. 1-36 incl.; twp 15, rge 26, sec. 1-36 incl.; twp 16, rge 26, sec. 1-36 incl.; twp 17, rge 26, sec. 1-36 incl.; twp 15, rge 27, sec. 1-3, 9-16 & 19-36 incl.; twp 14, rge 28, sec. 2-23 & 25-36 incl.; twp 15, rge 28, sec. 1-36 incl.; twp 16, rge 28, sec. 1-36 incl.; twp 17, rge 28, sec. 1-18 incl.; twp 14, rge 29, sec. 1, 2, 11-15 & 22-36 incl.; twp 15, rge 29, sec. 1-36 incl.; twp 16, rge 29, sec. 6, 7, 17-20, & 27-32 incl.; twp 14, rge 30, sec. 25 & 36; where drainage units are 1/4 section.*

POOL NAME	WELLS CAPABLE OF PROD.	NO. OF WELLS PRODUCING	AVE. PROD. 10 ⁻³ m ³ /DAY/WELL (PEAK PROD.)	SPACING REGULATIONS (IN EFFECT ON APRIL 1, 1985)
HATTON MILK RIVER - MEDICINE HAT GAS POOL	171	159	5.5	In accordance with the spacing regulations for the Hatton Milk River and Hatton Medicine Hat Gas Pools.
HOOSIER VIKING SAND GAS POOL	17	16	6.4	1 section drainage units
LIEBENTHAL MILK RIVER GAS POOL	80	70	0.6	1/4 section drainage units
LLOYDMINSTER COLONY SAND POOL	9	7	2.3	1/4 section drainage units
MARENGO VIKING GAS POOL	5	0	--	1 section drainage units
MILTON VIKING SAND GAS POOL	5	4	11.4	1 section drainage units
PIERCELAND MANNVILLE SAND GAS POOL	6	5	59.4	1 section drainage units
TOTNES VIKING GAS POOL	4	4	6.3	1 section drainage units
WHITESIDE VICTORIA SAND GAS POOL	3	3	14.6	1 section drainage units
WHITESIDE WEST VIKING SAND GAS POOL	8	8	2.9	1/2 section drainage units

(* Special provisions for fractional sections adjacent to fourth meridian.)

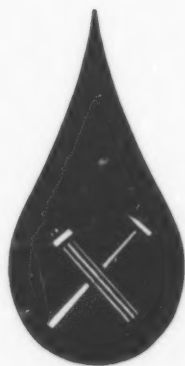
AREA SPACING DESCRIPTION*

SPACING AREA	DRAINAGE UNIT SIZE (No. of Lsds)	TARGET AREA	EXCEPTIONS
<u>- OIL AREAS -</u>			
A	2	Odd numbered Lsds.	A well greater than 1 1/2 miles from a producer in the same zone may be drilled on the even or odd Lsd.
B	2	Even numbered Lsds.	A well greater than 1 1/2 miles from a producer in the same zone may be drilled on the even or odd Lsd.
C	4	Any quadrant of a quarter section	Wells drilled within a 9 section square area centred on the section of an existing oil well shall take on the spacing of this existing well. Wells drilled within a 9 section square are centred on the section of an existing well in an established oil pool shall take on the spacing of this pool.
D	2	Odd or even Lsds.	Wells drilled within a 9 section square area centred on the section of an existing oil well shall take on the spacing of this existing well. Wells drilled within a 9 section square area centred on the section of an existing well in an established oil pool shall take on the spacing of this pool
E	1	Southeast quadrant of any Lsd.	Wells drilled within a corridor of 1609 metres around an established oil pool shall take on the spacing of this pool. Applies only to wells drilled within the Mannville Group, Detrital, Bakken or Birdbear Formations.
<u>- GAS AREAS -</u>			
G	16	Odd or even Lsds.	Wells drilled within a 9 section square area centred on a section that contains a gas well shall be drilled at least 500 metres from the sides of the drainage unit. Applies only to Mannville Formation.

* See the Oil and Gas Conservation Act & Regulations
Thereunder for complete area spacing regulations.

TYPICAL WELL LOGS

OF PRODUCING ZONES



LITHOLOGY LEGEND

Silt



Shale



Sandstone



Limestone



Calcareous shale



Argillaceous sandstone



Coal



Chert pebbles



Interbedded shale and sandstone



Dolomite or dolomitic limestone



Argillaceous and anhydritic dolomite



Oolitic



Anhydrite



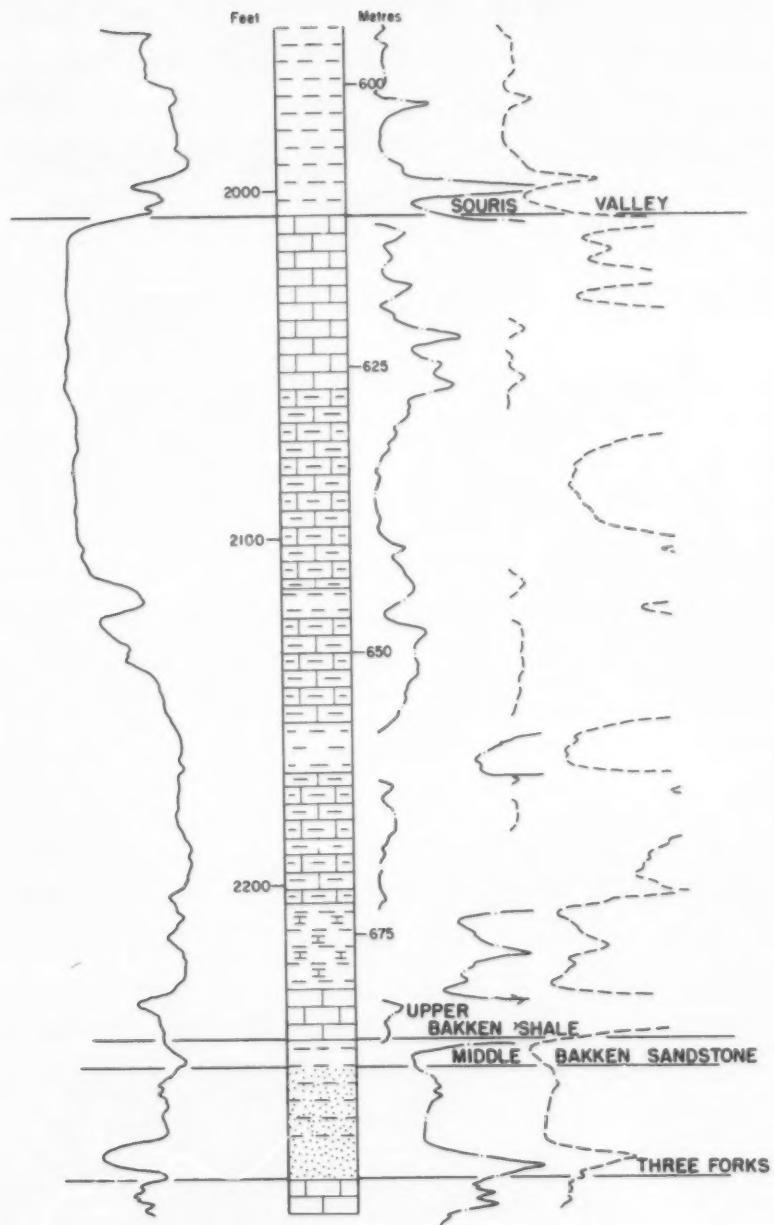
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HUDSON ROCANVILLE 4-4

4-4-16-31-W1

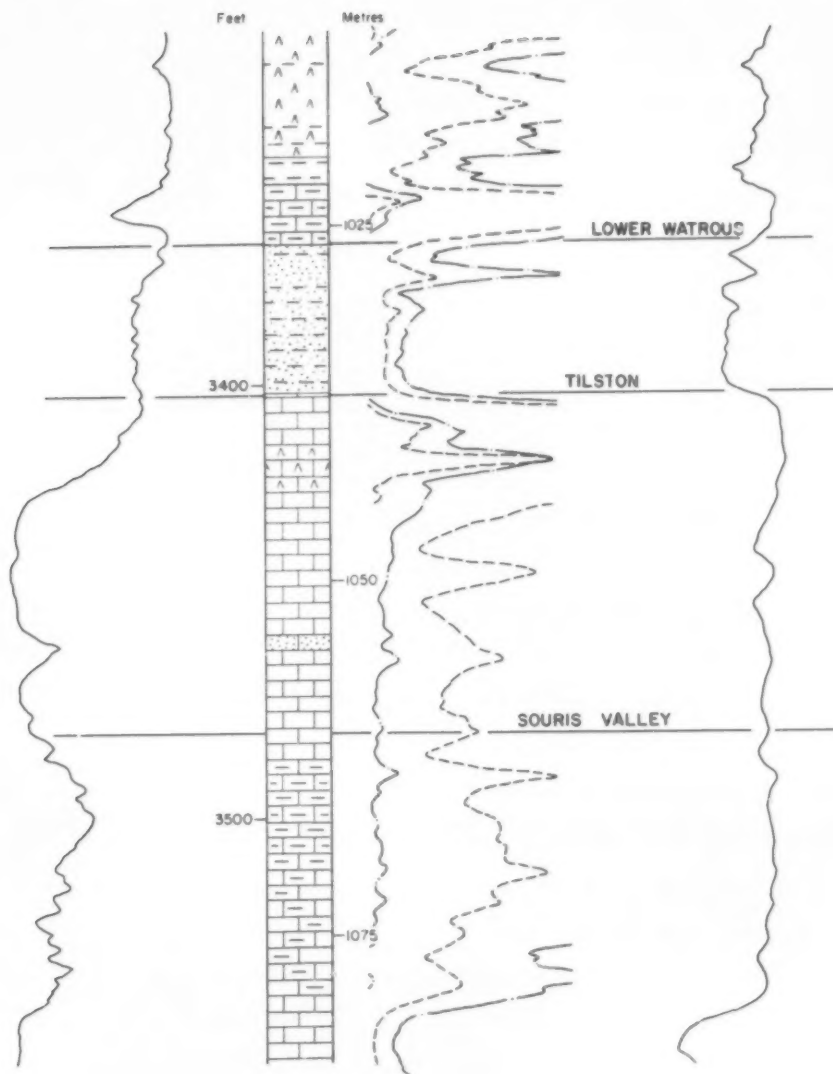
PRODUCING HORIZON : BAKKEN SAND



ROYALITE PARKMAN 2-3

2-3-9-33-W1

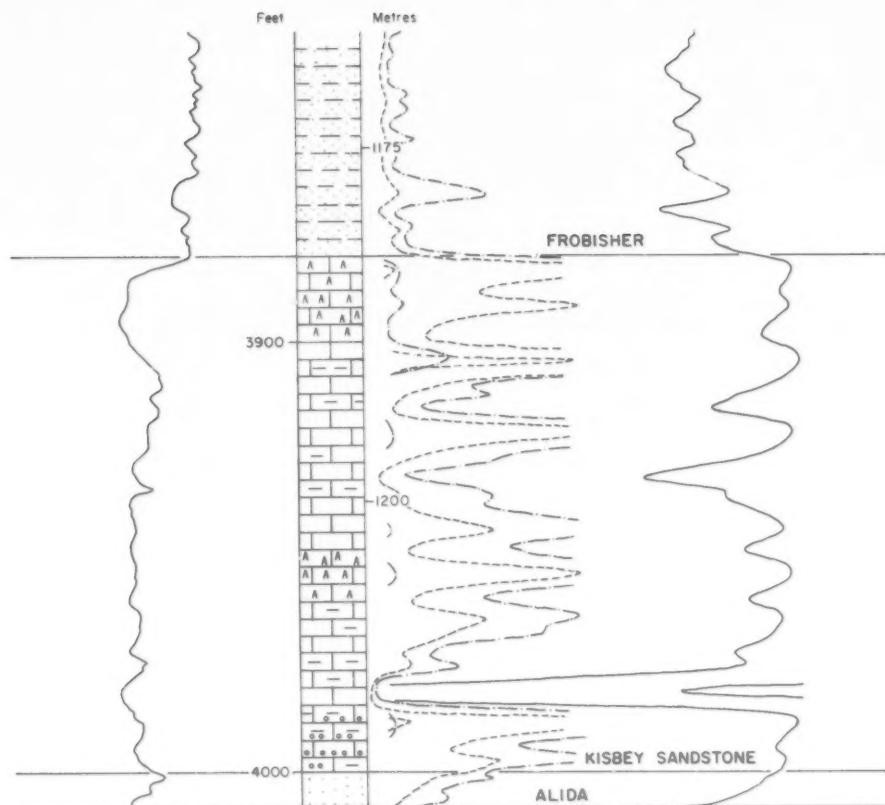
PRODUCING HORIZONS : TILSTON AND SOURIS VALLEY BEDS



MURPHY HASTINGS 7-24-4-34

7-24-4-34-W1

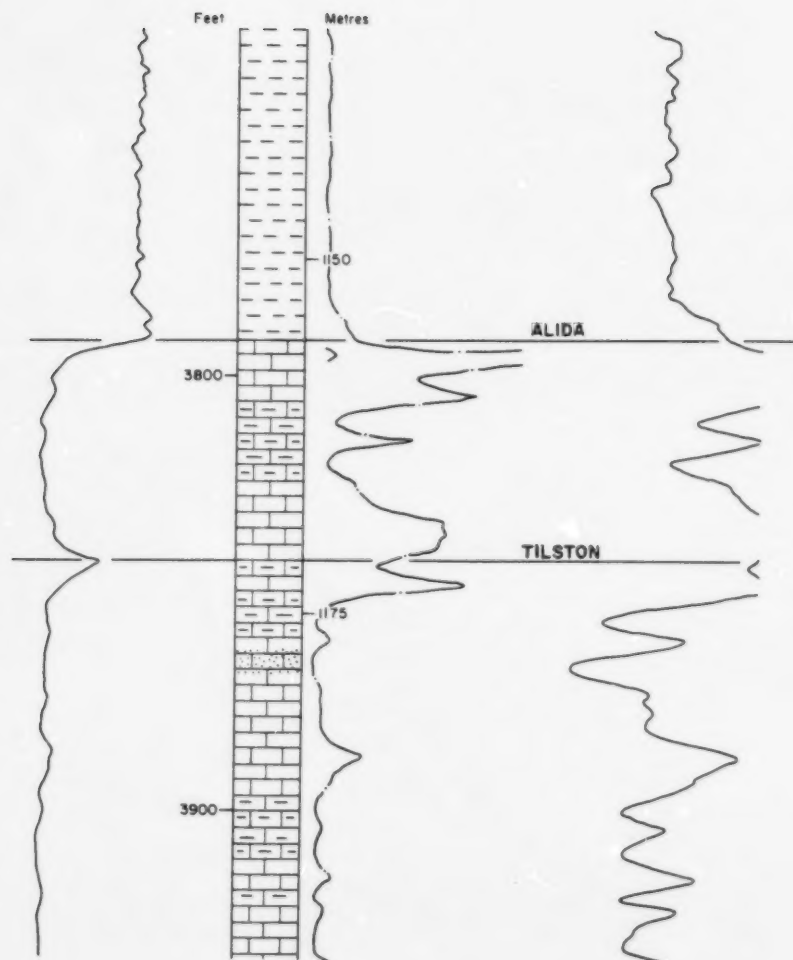
PRODUCING HORIZON : FROBISHER BEDS



SUN QUEENSDALE 2-13-6-1

2-13-6-1-W2

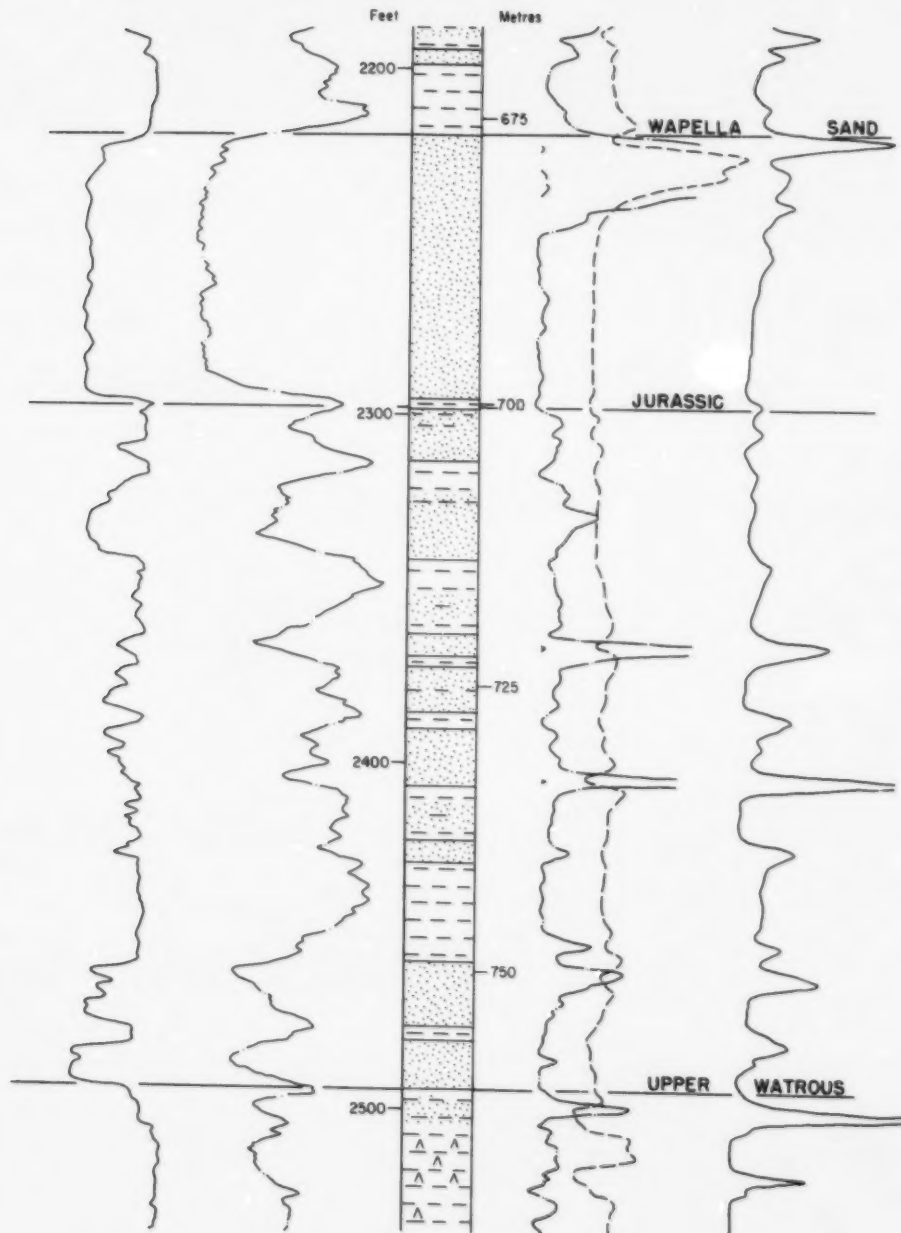
PRODUCING HORIZON : ALIDA BEDS



TIDEWATER WAPELLA 6-33

6-33-14-1-W2

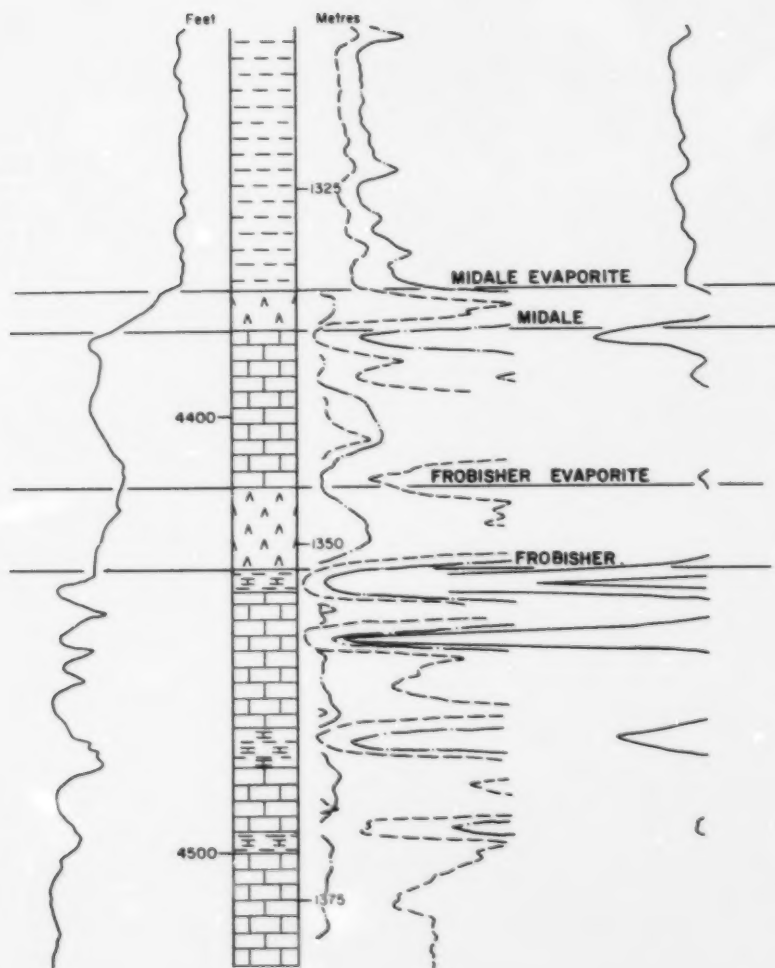
PRODUCING HORIZONS : WAPELLA AND JURASSIC SANDS



PHOENIX et al STEELMAN 5-24-5-6

5-24-5-6-W2

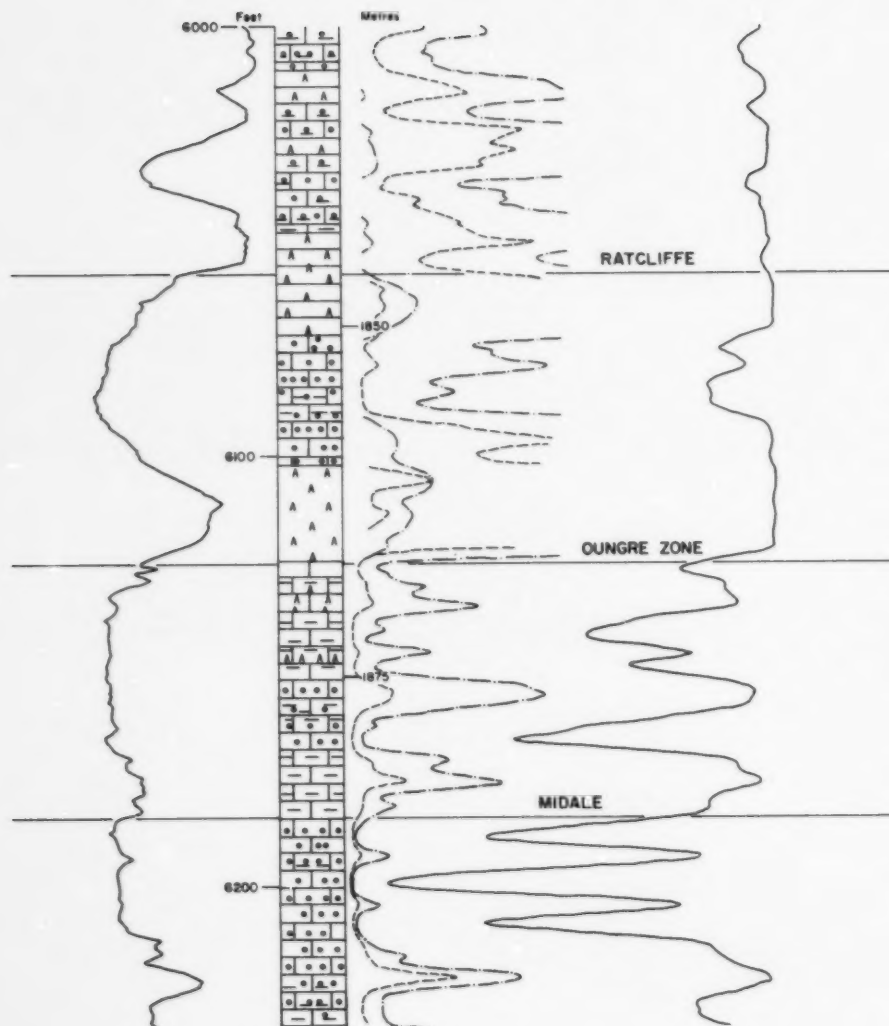
PRODUCING HORIZONS : MIDALE AND FROBISHER BEDS



CNEL CDR OUNGRE 9-24-2-15

9-24-2-15-W2

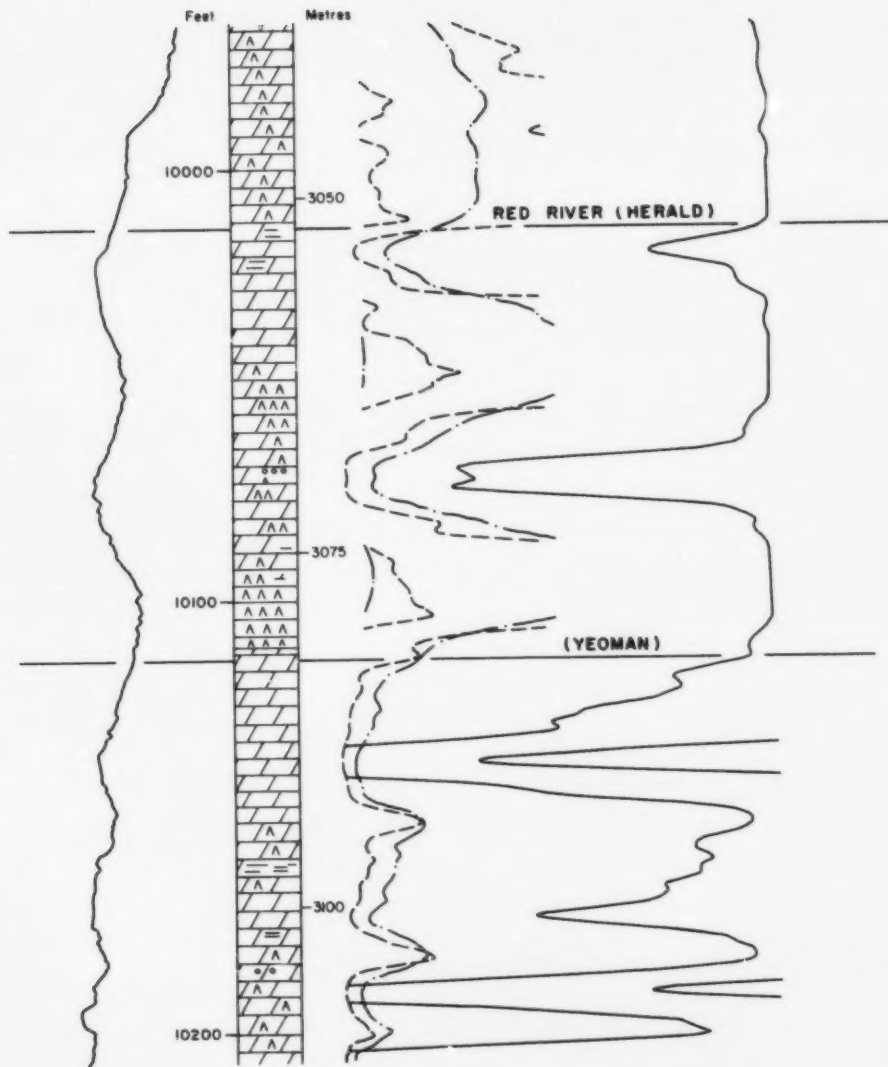
PRODUCING HORIZON : RATCLIFFE BEDS



C D R SCURRY S LAKE ALMA 1-14-1-17

1-14-1-17-W2

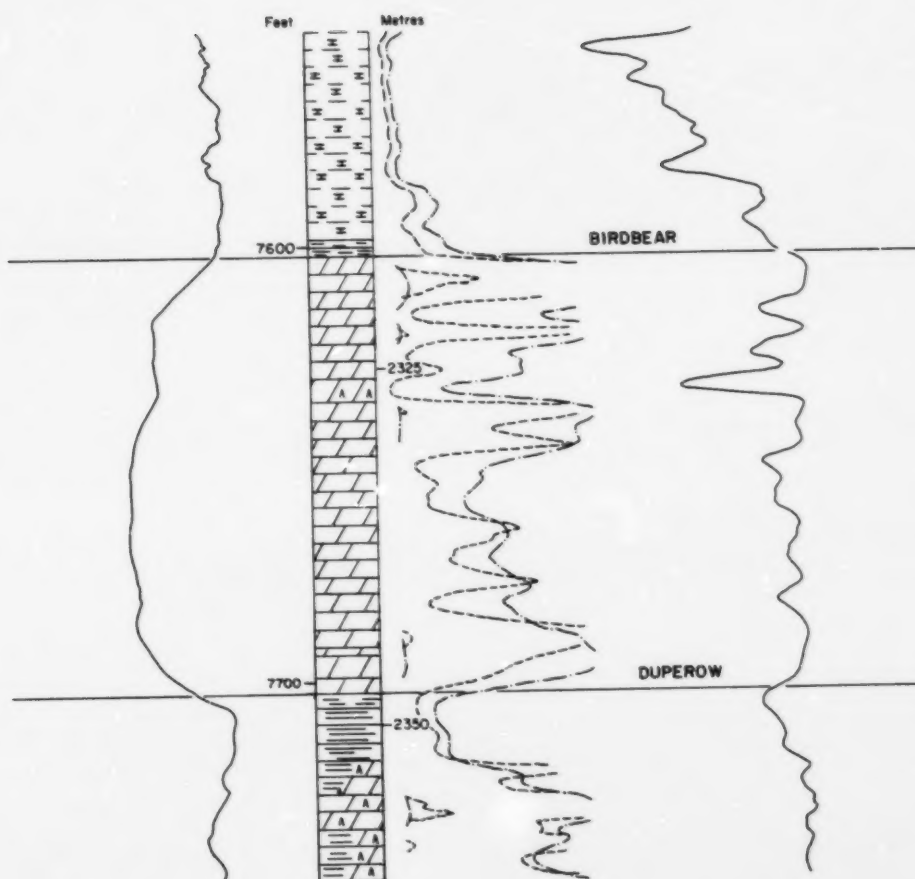
PRODUCING HORIZON : RED RIVER FORMATION



HB MIAMI HUMMINGBIRD 11-26-2-19

11-26-2-19-W2

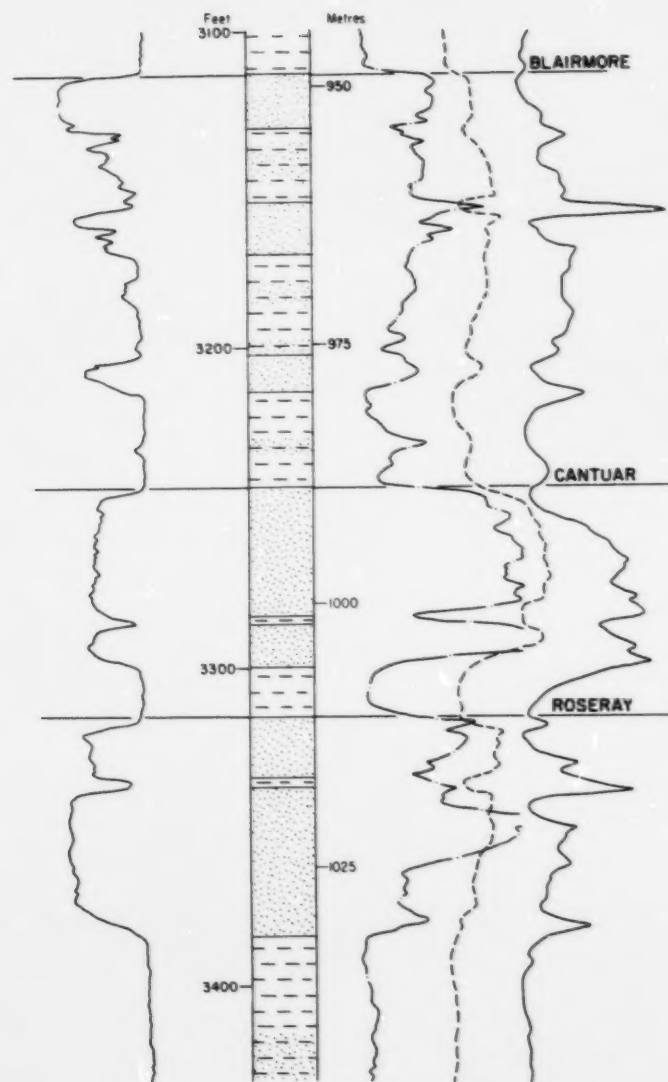
PRODUCING HORIZON : BIRDBEAR FORMATION



M.U.S. CANTUAR 5-2-16-17

5-2-16-17-W3

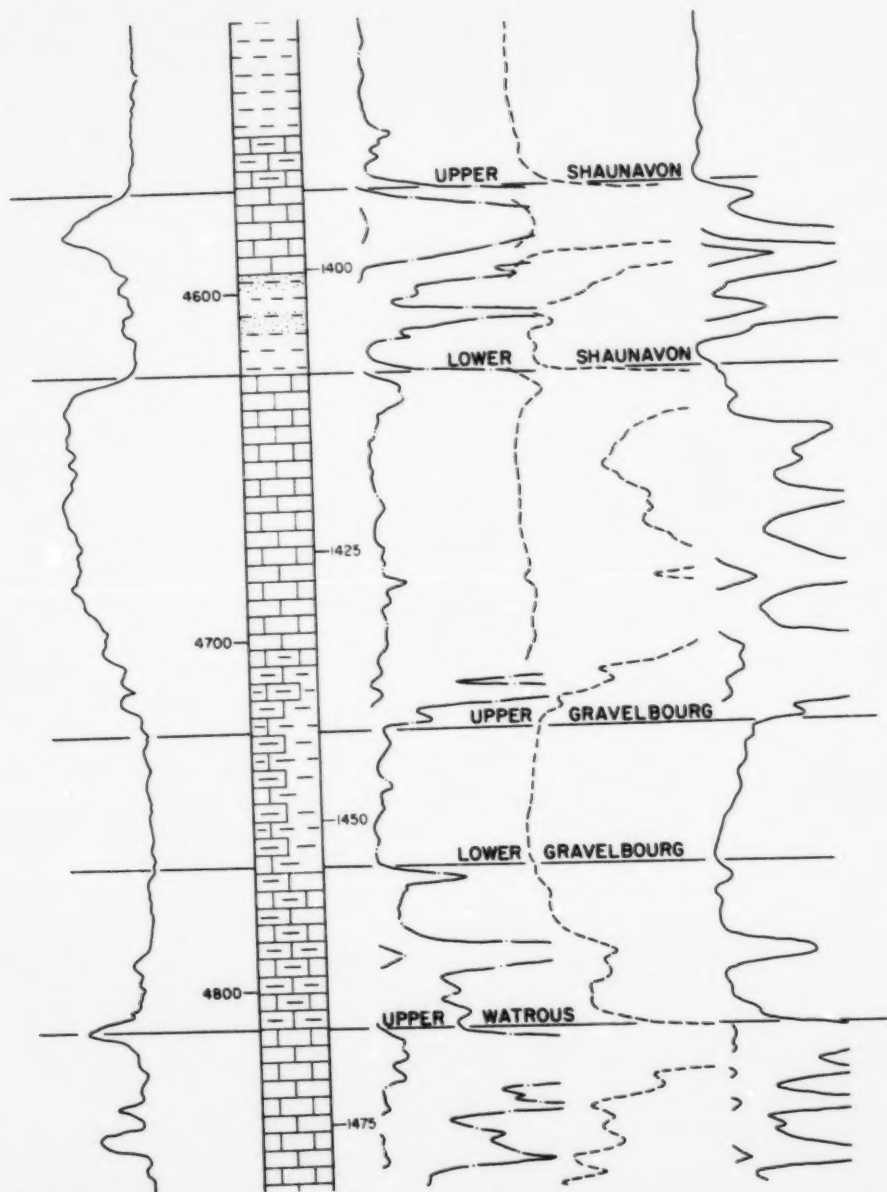
PRODUCING HORIZONS : CANTUAR AND ROSEMARY SANDS



TIDEWATER INSTOW CROWN 11-33

11-33-9-18-W3

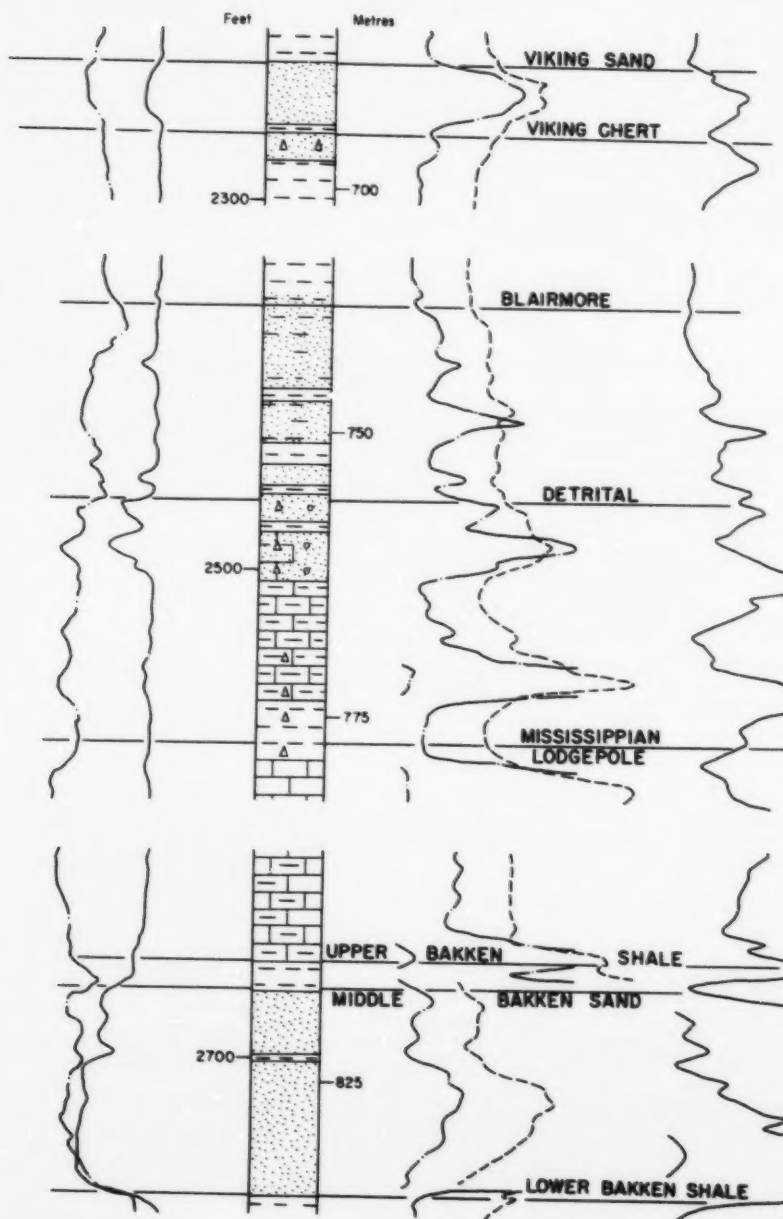
PRODUCING HORIZONS : UPPER AND LOWER SHAUNAVON FORMATIONS



COLEVILLE UNIT 5-30-31-23

5-30-31-23-W3

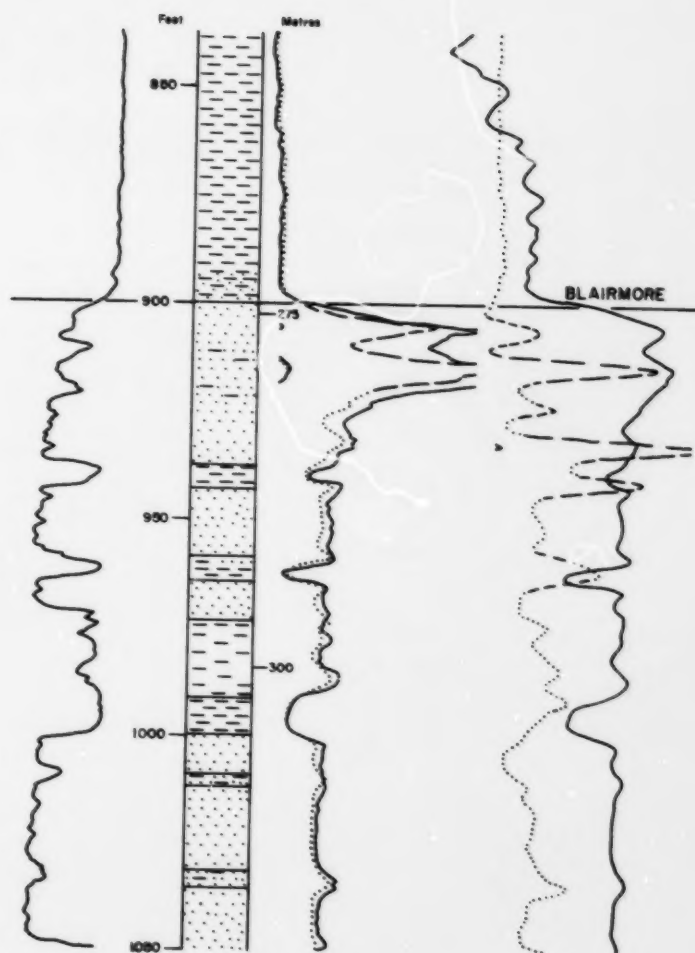
PRODUCING HORIZONS : VIKING AND MIDDLE BAKKEN SANDS



SPC BEACON HILL 10-17-61-24

10-17-61-24-W3

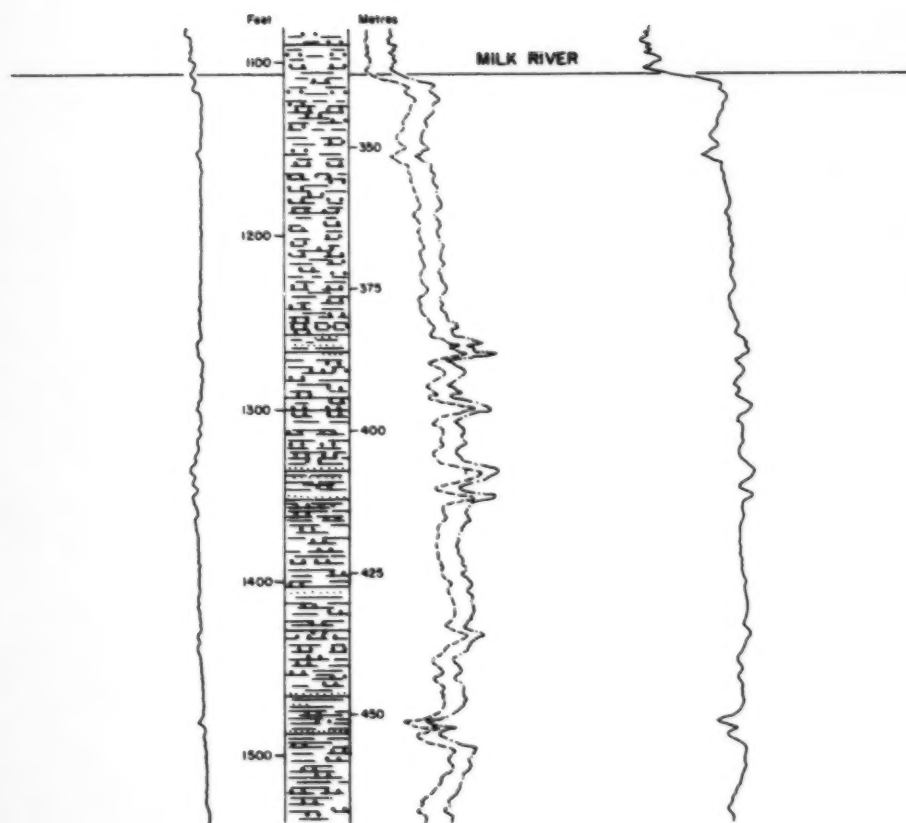
PRODUCING HORIZON : BLAIRMORE



PRECAM ET AL HATTON 11-21-17-25

11-21-17-25w3

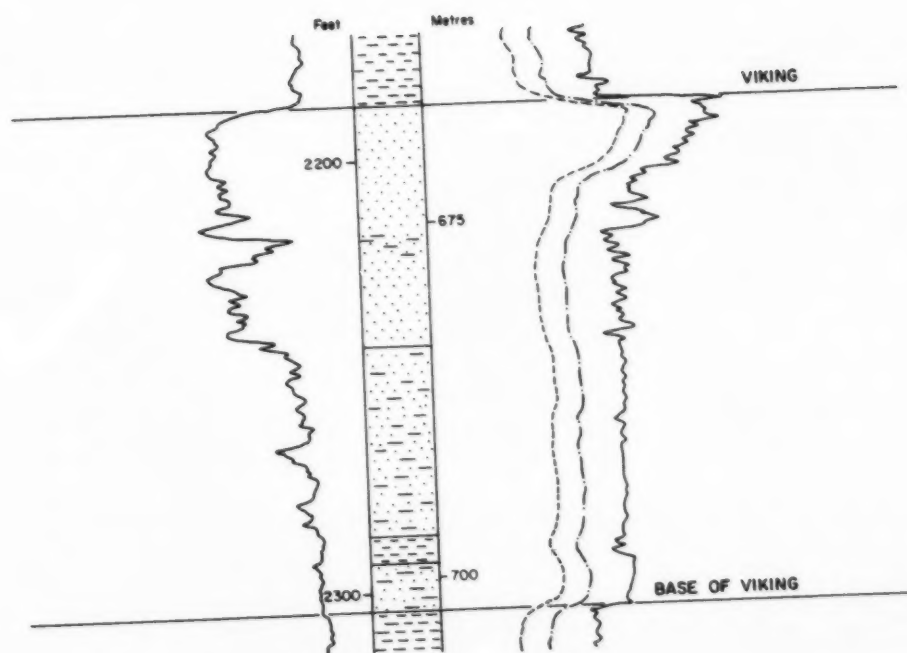
PRODUCING HORIZON : MILK RIVER SAND



IMP BAYHURST 11-19V-24-25

11-19-24-25-W3

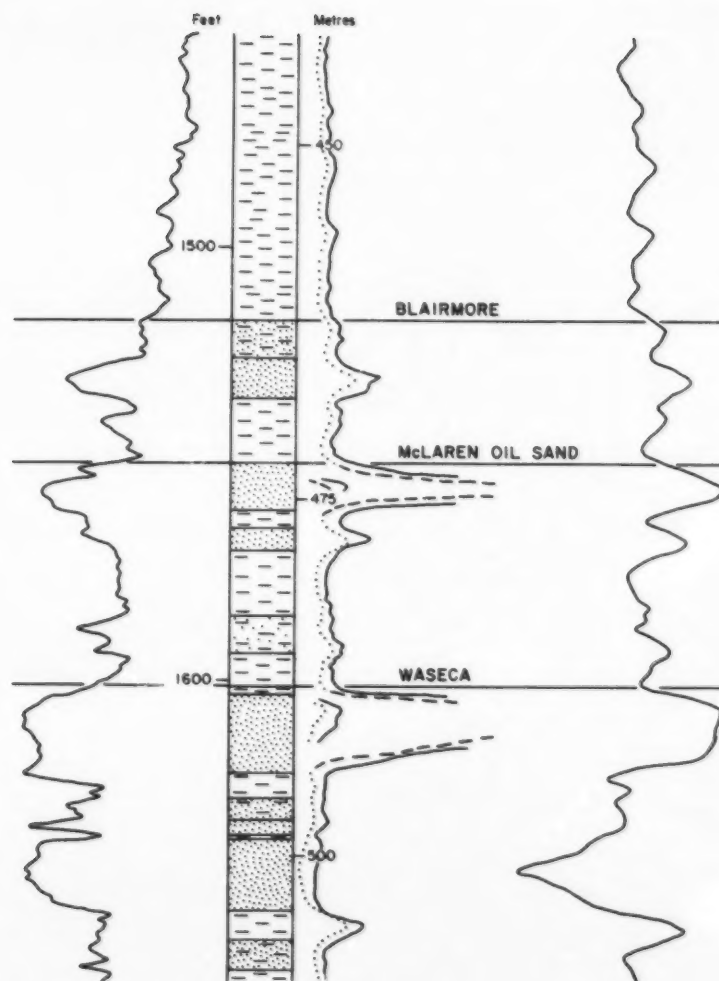
PRODUCING HORIZON : VIKING SAND



HUSKY BIG GULLY C6-27-49-25

C6-27-49-25-W3

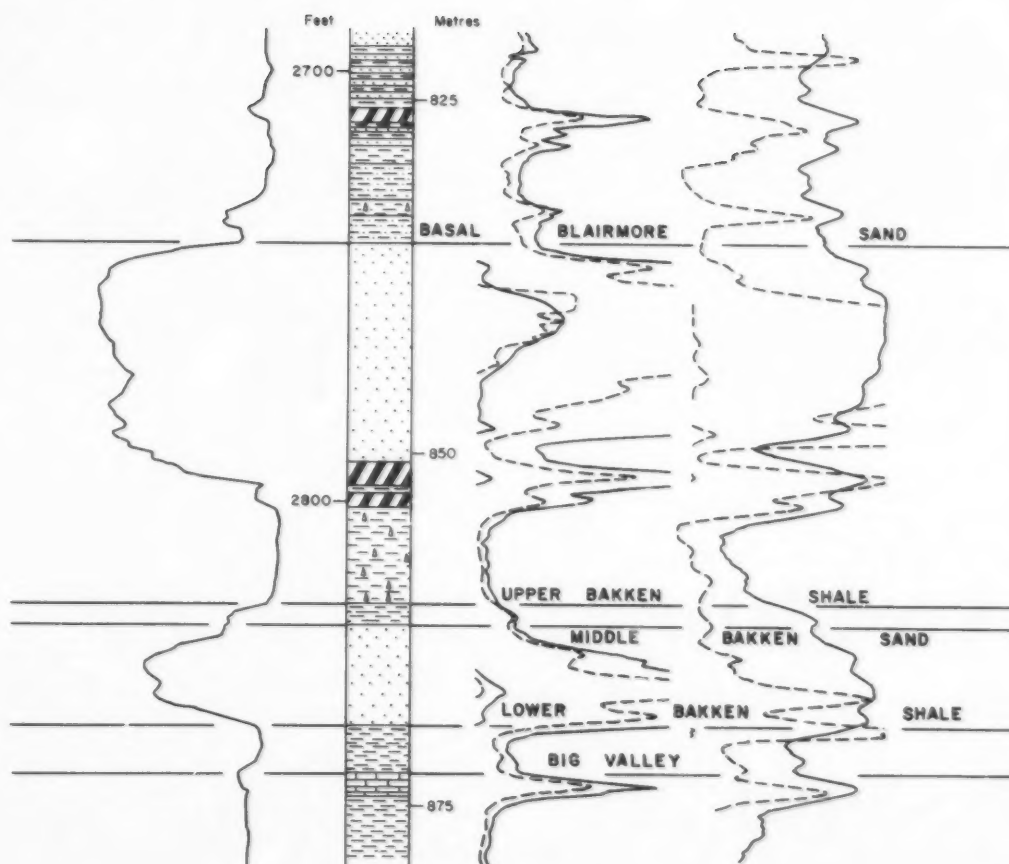
PRODUCING HORIZONS : McLAREN AND WASECA SANDS



HUSKY N. HOOSIER 6-14-32-27

6-14-32-27-W3

PRODUCING HORIZON : BASAL BLAIRMORE

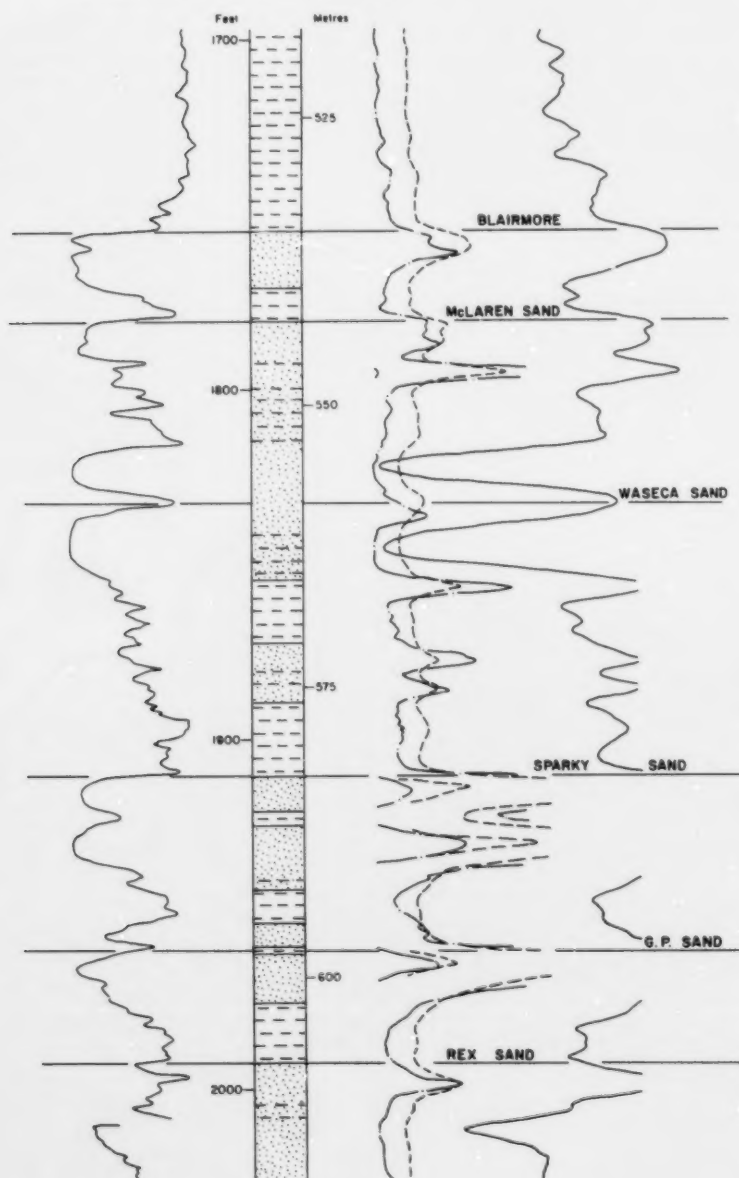


CDN RES EPPING A14-30-47-27

14-30-47-27-W3

PRODUCING HORIZONS : SPARKY & G.P. SANDS

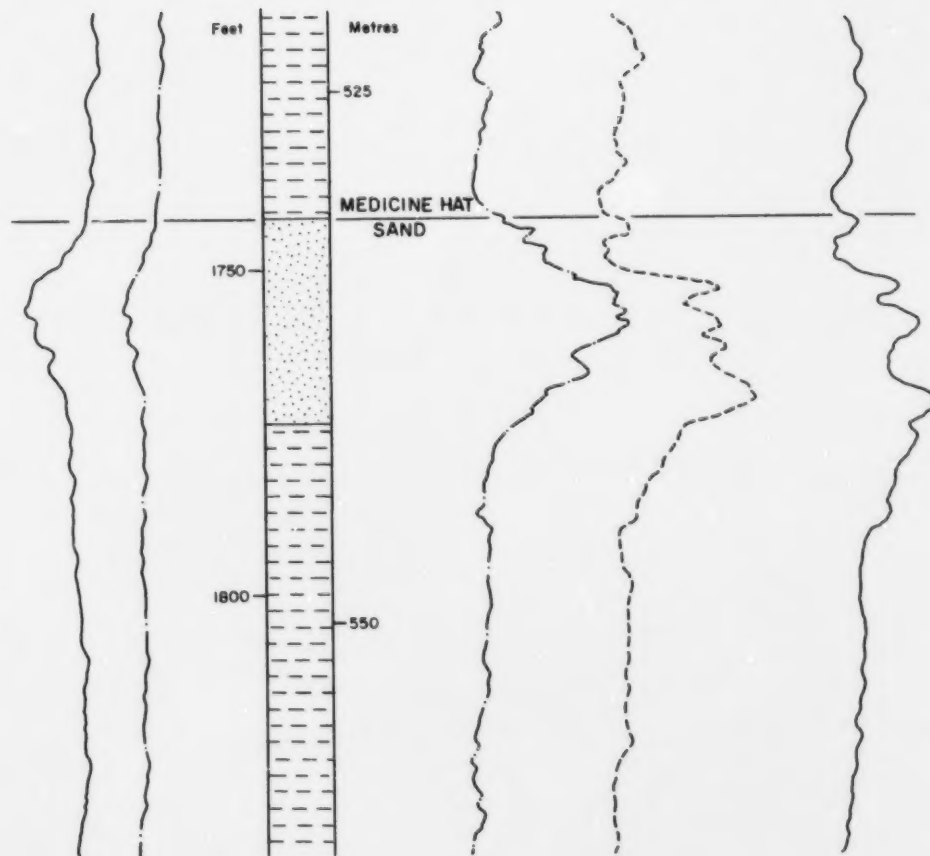
PRODUCING HORIZONS : SPARKY & G.P. SANDS



N C O HORSHAM 10-7-16-29

10-7-16-29-W3

PRODUCING HORIZON : MEDICINE HAT SAND



POOL PRESSURE DATA



POOL	DATUM METRES SUBSEA	PRESSURE GRADIENT kPa/m	TEMPERATURE AT DATUM DEPTH °C	VIRGIN PRESSURE AT DATUM DEPTH MPa	SATURATION PRESSURE
Aberfeldy Sparky Sand	+80.8				
Alameda Midale Beds:					
(Central Group)	792.5	7.24	57	15.39	10.64 MPa @ 57°C
(East Group)	746.8	7.24	57	15.27	10.80 MPa @ 57°C
Alameda West Frobisher Beds	786.6				
Alameda West Midale Beds	765.5				
Alida East Alida Beds	536.4	7.67	44	10.47	10.47 MPa @ 43°C
Alida West Alida Beds	545.6	7.67	45	10.54	10.54 MPa @ 45°C
Alsask Basal Blairmore Sand	91.4	9.27	33		
Antelope Lake Upper Shaunavon	300.2	8.82	49	10.00	
Arcola Frobisher-Alida Beds	570.0	8.37	53	11.00	8.77 MPa @ 53°C
Avon Hill Viking	13.7	8.37	23	6.72	
Baldwinton Sparky Sand	+43.7				
Battrum North Roseray Sand	172.4				
Battrum Roseray Sand	179.8	8.82	46	8.56	1.39 MPa @ 43°C
Bench Upper Shaunavon	438.9	8.82		12.45	
Benson Midale Beds	754.4	7.92	68	14.38	
Beverley Cantuar Sand	243.8	9.05	48	9.11	9.11 MPa @ 48°C
Beverley North Cantuar Sand	232.9				
Beverley Upper Roseray Sand	246.9	8.78			
Bienfait Midale Beds	1005.7				
Big Gully McLaren Sand	+141.7				
Big Gully Waseca Sand	+125.0				
Bone Creek Upper Shaunavon	464.8	8.60	48	12.27	4.78 MPa @ 49°C
Bromhead Midale Beds	1098.0	8.60		17.65	
Browning Frobisher-Alida Beds	682.8	7.24	59	12.55	
Bryant Frobisher Beds	836.2				
Bryant Midale Beds	807.4				
Buffalo Coulee Bakken Sand	108.2	9.66			2.21 MPa @ 26°C
Buffalo Coulee North Bakken Sand	93.0				
Butte Upper Shaunavon	417.6	8.82	49	12.37	1.23 MPa @ 49°C
Buzzard Lloydminster Sand	+38.4				
Cactus Lake Basal Mannville Bakken Sand	97.1				
Cantal Frobisher-Alida Beds	579.1	6.79	47	10.87	10.85 MPa
Cantuar Lower Roseray Sand	228.6	8.78	51	9.10	9.10 MPa @ 52°C
Cantuar East Cantuar Sand	228.6	8.60	51		
Cantuar East Roseray Sand	228.6	8.78	51		
Cantuar Main Cantuar Sand	227.1	8.78	51	8.95	8.95 MPa @ 52°C

POOL	DATUM METRES SUBSEA	PRESSURE GRADIENT kPa/m	TEMPERATURE AT DATUM DEPTH °C	VIRGIN PRESSURE AT DATUM DEPTH MPa	SATURATION PRESSURE
Carnduff Midale Beds	723.9	7.24	58	15.17	
Carnduff Frobisher Beds	752.9	7.24	59	12.98	
Celtic Sparky Sand	+118.9				
Celtic Waseca Sand	+140.2				
Clarilaw Frobisher-Alida Beds	623.3	7.24	58	11.78	
Clintonville Shaunavon Pool	456.8				
Coleville Bakken Sand	109.7	9.50			
Coleville Mannville Sand	54.9				
Coleville South Bakken Sand	127.4				
Cosine Lake Lloydminster Sand	100.6				
Court Bakken Sand	129.8				
Covington Upper Shaunavon	416.1	8.82	52	11.94	3.52 MPa @ 51°C
Covington West Upper Shaunavon	417.6	8.82			
Crystal Hill Souris Valley Beds	434.3	8.37		9.19	
Dalesboro Frobisher-Alida Beds	670.6	8.37	56	12.00	
Dee Valley East Sparky Sand	+79.2				
Dee Valley East Waseca Sand	+102.1				
Dee Valley Waseca Sand	103.6				
Delta Upper Shaunavon	306.3	8.82	46	10.57	7.46 MPa @ 47°C
Dodsland Viking Sand	+4.6	7.99	23	6.41	6.41 MPa
Dollard Upper Shaunavon	434.3	8.60	59	11.80	6.32 MPa @ 60°C
Druid Mannville Sands	59.0				
Dulwich North Sparky Sand	+86.9				
Dulwich Sparky Sand	+79.2				
Eastbrook Upper Shaunavon	461.8	9.05	54	15.70	
Edam Waseca Sand	+119.2				
Edam West GP Sand	+93.2				
Edam West Mannville Sand	+109.9				
Edam West Sparky Sand	+92.2				
Edam West Waseca Sand	+115.6				
Edenvale Tilston Beds	533.4	7.69	43		
Elmore Midale Beds	685.8	7.92	52	14.33	
Elmore Frobisher Beds	701.0	7.92	52	12.05	6.83 MPa @ 51°C
Epping G.P. Sand	+57.9				
Epping Sparky Sand	+67.1				
Eureka Viking	18.3	7.99	23	6.12	4.43 MPa @ 26°C
Eyehill Cummings Sand	89.9				
Fertile Tilston Beds	437.0				

POOL	DATUM METRES SUBSEA	PRESSURE GRADIENT kPa/m	TEMPERATURE AT DATUM DEPTH °C	VIRGIN PRESSURE AT DATUM DEPTH MPa	SATURATION PRESSURE
Flat Lake Ratcliffe Beds	1271.0	8.37	73	20.15	9.80 MPa @ 81°C
Florence Frobisher Beds	789.4	8.37	57	13.28	
Forest Bank Mannville Sands	+115.8				
Forest Bank Sparky Sand	+99.1				
Forest Bank Waseca Sand	+120.4				
Fosterton Rosearay Sand:					
Middle (II) Rosearay Sand	221.0	8.82	52	9.10	
Lower (I) Rosearay Sand	221.0	8.82	52	9.10	
Northwest Group	218.5	8.82	52		
Freda Lake Ratcliffe Beds	960.1	8.37		18.56	
Freemont Sparky Sand	+43.8				
Freemont Waseca Sand	+62.5				
Freestone Frobisher-Alida Beds	570.0	7.92	54	11.29	
Frys Tilston-Souris Valley Beds	402.3	8.37			
Furness Sparky Sand	+73.2				
Fusilier Bakken Sand Pool	121.9	9.27			
Gainsborough Frobisher-Alida Beds	579.1	7.24	44		
Glen Ewen Midale Beds	728.5	7.24	56	15.17	
Glen Ewen Frobisher Beds	751.3	7.24	56		
Golden Lake North Sparky Sand	+96.0				
Golden Lake North Waseca Sand	+121.9				
Golden Lake South Sparky Sand	+96.0				
Golden Lake South Waseca Sand	+115.8				
Griffin Frobisher Beds Pool	690.4	8.60	62		
Gull Lake Basal Cantuar Sand	300.2	8.82	47		8.79 MPa @ 47°C
Gull Lake Central Upper Shaunavon	387.1	8.82	51		
Gull Lake North Upper Shaunavon	365.8	8.82	48	11.11	1.10 MPa @ 46°C
Gull Lake South Upper Shaunavon	402.3	8.82	52	11.71	
Gully Lake Waseca Sand	+103.6				
Handsworth Alida Beds	536.4	8.60	51	10.99	
Hartaven Frobisher-Alida Beds	577.6	8.60	56	11.58	
Hastings East Frobisher Beds	598.7				
Hastings Frobisher Beds	643.1	6.79	49	11.65	11.65 MPa
Hazelwood Tilston Beds	425.2	8.37	43	9.53	
Hazlet Rosearay Sand	205.7	9.05	47	9.13	5.60 MPa @ 47°C
Hearts Hill Bakken Sand	64.9				
Hoffer Ratcliffe Lower Beds	1248.2	8.60		19.47	
Hoffer Ratcliffe Upper Beds	1231.4	8.60		19.33	
Hoosier Bakken Sand Pool	150.9	9.50			

POOL	DATUM METRES SUBSEA	PRESSURE GRADIENT kPa/m	TEMPERATURE AT DATUM DEPTH °C	VIRGIN PRESSURE AT DATUM DEPTH MPa	SATURATION PRESSURE
Hume Frobisher Beds	739.1	8.60	64	13.21	
Hume Midale Beds	723.9	8.60		14.23	
Hummingbird Birdbear	1585.0	8.14	82	23.16	8.09 MPa @ 82°C
Hummingbird Ratcliffe Beds	1155.2	8.60	71	18.70	6.03 MPa @ 71°C
Huntoon Frobisher Beds	754.4	8.60	61		
Huntoon Midale Beds	737.6	8.60	55		
Illerbrun Upper Shaunavon	414.5	8.82	49	11.86	3.15 MPa @ 49°C
Ingoldsby Frobisher-Alida Beds	548.6	7.89	46	10.51	4.81 MPa @ 45°C
Innes Frobisher Beds	719.3	8.60	63	12.98	7.78 MPa @ 61°C
Instow Upper Shaunavon	464.8	8.60	48	12.27	4.78 MPa @ 49°C
Java Cantuar Sand	242.3				
Johnston Upper Shaunavon	371.9	8.82	48	9.24	
Kenosee Tilston Beds	426.7	7.92	46	9.38	
Kerrobert Viking Sand	3.0				
Kisbey Birdbear Pool	1018.3				
Lake Alma Ratcliffe Beds	1268.0	8.37	67	20.27	
Landrose McLaren Sand	+144.8				
Landrose Waseca Sand	+129.5				
Lashburn South Sparky Sand	+93.7				
Lashburn South Waseca Sand	+117.3				
Lashburn Waseca Sand	+126.5				
Lashburn West Sparky Sand	+81.4				
Leitchville Shaunavon	452.6	8.60	50	12.51	4.78 MPa @ 49°C
Leon Lake Shaunavon	457.2	8.60	52	10.69	5.52 MPa @ 41°C
Lightning Tilston Beds	449.6	7.92	46	9.39	
Lloydminster Sparky Sand	+83.8				
Lone Rock Sparky Sand	+71.6				
Lost Horse Hill Frobisher-Alida Beds	559.3	8.14	57	11.40	3.36 MPa @ 55°C
Lougheed Midale Beds	807.7	8.14	61		
Loverna Detrital	126.5	8.60			
Low Lake Waseca Sand	+111.3				
Lucky Hills Viking	7.6	8.37			
Luseland Bakken Sand	44.9				
Macklin Sparky Sand	39.6				
Macoun Midale Beds	946.4	8.82	63		9.32 MPa @ 63°C
Macoun West Midale Beds	978.3				
Maidstone McLaren Sand	+126.1				

POOL	DATUM METRES SUBSEA	PRESSURE GRADIENT kPa/m	TEMPERATURE AT DATUM DEPTH °C	VIRGIN PRESSURE AT DATUM DEPTH MPa	SATURATION PRESSURE
Maidstone Waseca Sand	+113.4				
Main Success Roseray Sand	225.6	8.60	50	9.06	8.67 MPa @ 59°C
Marsden South Sparky Sand	+31.7				
Marsden Sparky Sand	+36.1				
Melrose Frobisher-Alida Beds	551.7	8.14	54		
Midale Central Midale Beds	800.1	7.92	62	14.20	6.09 MPa @ 63°C
Midale Central Frobisher Beds	786.4	7.69			5.24 MPa @ 57°C
Minard Midale Beds	738.5				
Moose Mountain Tilston Beds	435.9	8.48	46	9.45	3.14 MPa @ 41°C
Moose Valley Tilston Beds	428.2	8.60			
Morrisview Frobisher-Alida Beds	661.4	8.37	48	12.37	
Neilburg McLaren Sand	+103.9				
Neptune Ratcliffe Beds	1034.8	8.37			
North Antler Midale Beds	658.4	8.14	56	13.98	
Northgate Frobisher Beds	1033.3	8.14	63		
Northgate Midale Beds	1021.1	7.24	71	18.03	14.48 MPa @ 70°C
North Handsworth Alida Beds	538.0	8.60	55	11.08	
North Hoosier Bakken Sand	135.3	9.50	31	7.74	7.79 MPa @ 31°C
North Hoosier Basal Blairmore Sand	120.4	9.34	29	5.85	
Northminster North G.P. Sand	+83.2				
Northminster North Sparky Sand	+94.1				
Northminster Sparky Sand	+91.4				
North Premier Roseray Sand	228.6	8.60	47	9.25	3.12 MPa @ 47°C
North Premier Upper Shaunavon	310.9	8.82	57	10.31	0.89 MPa @ 49°C
Nottingham Alida Beds	548.6	7.15	43	10.60	10.66 MPa @ 44°C
Oakley Frobisher Beds	582.2	6.72	46	10.95	10.95 MPa
Oungre Ratcliffe Beds	1188.7	8.14	70	18.96	8.07 MPa
Parkman Souris Valley Beds	416.1	8.37	49	9.09	
Parkman Tilston Beds	442.0	7.92	43	9.51	2.79 MPa @ 43°C
Parkman Tilston-Souris Valley Beds	402.3	7.92	38	9.10	2.41 MPa @ 38°C
Parkman South Tilston-Souris Valley	455.7	8.23	38	9.45	
Pennant Upper Shaunavon	265.2	9.05			
Pikes Peak G.P. Sand	+81.0				
Pikes Peak Sparky Sand	+91.4				
Pikes Peak Waseca Sand	+123.4				
Pinto Midale Beds	1024.1	7.01	70	17.24	13.85 MPa @ 70°C
Pinto Frobisher Beds	1036.3	7.01	66	16.55	

POOL	DATUM METRES SUBSEA	PRESSURE GRADIENT kPa/m	TEMPERATURE AT DATUM DEPTH °C	VIRGIN PRESSURE AT DATUM DEPTH MPa	SATURATION PRESSURE
Plato North Viking Sand	20.8				
Plato Viking Sand	9.1	8.37	24	6.89	3.28 MPa @ 21°C
Plover Lake Bakken Sand	86.6				
Queensdale East Frobisher-Alida Beds	573.0	7.58	47	10.84	7.72 MPa @ 46°C
Queensdale North Alida Beds	588.3	7.58	49	10.85	
Queensdale West Alida Beds	600.5	7.58	48	11.25	11.24 MPa @ 48°C
Ralph Midale Beds	723.9	7.92			
Rapdan Upper Shaunavon	449.6	8.60	49	13.72	5.61 MPa @ 56°C
Rocanville Bakken Sand	160.0	8.37	27	6.23	
Roncott Bakken Sand	1121.7	8.08	59		2.05 MPa @ 52°C
Rosebank Alida Beds	536.4	7.19	44	10.49	
Rosebank South Alida Beds	533.4	7.46	43		
Rush Lake Sparky Sand	+88.3				
Rush Lake Waseca Sand	+113.9				
Senlac Lloydminster Sand	78.2				
Sherwood Frobisher Beds	701.0	7.92	56	12.27	8.76 MPa @ 56°C
Silverdale Sparky Sand	+68.6				
Silverton Frobisher Beds	618.7	8.37	49		
Skinner Lake Ratcliffe Beds	1008.9	8.37			
Smiley Dewar Viking Sand	15.2	7.99	23	6.47	6.36 MPa
Smiley Dewar Viking Chert	18.3	7.99	23	6.49	
Souris Flat Frobisher Beds	789.4	8.28	59	13.34	11.82 MPa @ 59°C
South Fletwode Tilston Beds	429.8	7.92	44	9.45	
South Success Roseray Sand	231.0	8.60	51	8.96	8.96 MPa @ 53°C
Standard Hill Waseca Sand	+109.7				
Star Valley Frobisher-Alida Beds	536.4	7.46	52	10.82	8.61 MPa @ 52°C
Steelman Midale Beds	853.4	7.01	67	14.34	14.34 MPa
Steelman Frobisher Beds	853.4	7.01	67	14.36	
Storthoaks Alida-Tilston Beds	493.8	7.92	38	9.80	8.09 MPa @ 42°C
Stoughton Frobisher-Alida Beds	644.7	7.46	61	12.07	8.09 MPa @ 62°C
Stoughton South Frobisher Beds	647.7	7.46		14.13	
Success North Roseray Sand	236.9				
Success Roseray Sand Alpha	219.5	8.60	51	8.76	7.86 MPa @ 51°C
Suffield Roseray Sand	259.1	8.60	52	12.98	7.41 MPa @ 44°C
Suffield Upper Shaunavon	318.5	8.82	50	10.82	
Tangleflags East McLaren Sand	+139.6				
Tangleflags G.P. Sand	+100.6				

POOL	DATUM METRES SUBSEA	PRESSURE GRADIENT kPa/m	TEMPERATURE AT DATUM DEPTH °C	VIRGIN PRESSURE AT DATUM DEPTH MPa	SATURATION PRESSURE
Tangleflags Lloydminster Sand	+61.0				
Tangleflags North Cummings Sand	+50.3				
Tangleflags North G.P. Sand	+99.1				
Tangleflags North Lloydminster Sand	+51.8				
Tangleflags Sparky Sand	+109.7				
Tangleflags West G.P. Sand	+102.9				
Tangleflags West Lloydminster Sand	+62.4				
Tangleflags West Sparky Sand	+113.5				
Tatagwa Midale Beds	857.4				
Verlo Roseray Sand	213.4	8.82	52	9.14	9.24 MPa @ 39°C
Viewfield Frobisher Beds	670.6	8.69	65	12.22	9.03 MPa @ 65°C
View Hill Midale Beds	957.1	8.75	76	15.69	
Wapella Sand	76.2	8.37	32	5.26	0.34 MPa @ 29°C
Warnley Alida Beds	496.2	8.37	54	10.15	
Wauchope Alida-Tilston Beds	524.1				
Weir Hill Frobisher Beds	762.0	7.24			
Westhazel G.P. Sand	+90.1				
Westhazel Sparky Sand	+103.8				
West Innes Frobisher Beds	722.4	8.60	64	13.07	
West Kingsford Midale Beds	876.3	7.01	67	14.82	9.40 MPa @ 67°C
Weyburn Frobisher Beds	807.7	8.14	61		
Weyburn Midale Beds	807.7	8.14	61	14.60	
Weyburn North Frobisher Beds	787.1				
Weyburn North Midale Beds	766.9				
White Bear Tilston Beds	445.0	7.92	43	9.74	
White Bear Tilston-Souris Valley Beds	457.2	8.37	39	9.47	2.41 MPa
Whitemud Upper Shaunavon	469.4	9.05	54	13.79	5.52 MPa @ 41°C
Whiteside Viking Sand	36.6	7.92	24	6.38	
Wildwood Alida Beds	582.2	8.37	48	10.77	
Willmar Frobisher Alida Beds	661.4	7.24	54	11.87	11.32 MPa @ 53°C
Winmore Frobisher Beds	641.6	8.60		11.23	
Winter Cummings Sand	36.9				
Workman Midale Beds	685.8	7.24	54	14.75	7.64 MPa @ 53°C
Workman Frobisher Beds	701.0	7.69	54	12.27	6.55 MPa @ 59°C

INITIAL GAS POOL PRESSURE DATA

POOL	DATUM (METRES SUBSEA)	TEMPERATURE AT DATUM DEPTH (°C)	PSEUDO- REDUCED TEMPERATURE	PSEUDO- REDUCED PRESSURE	VIRGIN PRESSURE AT DATUM DEPTH (kPa)
Bayhurst Viking Gas Pool	+9.1	25	1.61	1.47	6700
Bayhurst West Viking Gas Pool	-7.6	28	1.60	1.47	6720
Beacon Hill Mannville Sand Gas Pool	+256.0	21	1.56	0.47	2170
Beacon Hill West Mannville Sand Gas Pool	+241.7	21	1.56	0.46	2351
Beverley East Cantuar Gas Pool	+170.0	46	1.67	2.11	9650
Bigstick Second White Specks Gas Pool	+101.2	26	1.59	0.46	6105
Brock Viking Sand Gas Pool	-3.0	28	1.59	1.46	6690
Brock East Viking Gas Pool	-7.6	29	1.62	1.55	7060
Burstall Medicine Hat Sand Gas Pool	+231.5	17	1.53	0.94	4309
Burstall Milk River Gas Pool	+278.8	16	1.53	0.75	3447
Cavalier Spinney Hill Sand Gas Pool	+162.1	18	1.60	0.70	3140
Coleville-Smiley Viking Sand Gas Pool	+12.2	24	1.50	1.40	6480
Doddsland North Viking Gas Pool	+21.3	23	1.50	1.33	6110
Fort Pitt Mannville Sand Gas Pool	+191.0	20	1.79	0.61	2790
Fort Pitt North Mannville Sand Gas Pool	+198.9	19	1.77	0.62	2850
Glidden Viking Gas Pool	-1.5	22	1.57	1.47	6690
Greenan Viking Gas Pool	-15.2	28	1.61	1.45	6580
Gull Lake Cantuar Gas Pool	-259.1	43	1.59	2.05	9480
Hatton Medicine Hat Sand Gas Pool	+274.3	17	1.53	0.94	4310
Hatton Milk River Gas Pool	+321.6	16	1.53	0.75	3450
Hoosier Viking Sand Gas Pool	-18.3	26	1.52	1.43	6560
Liebenthal Milk River Gas Pool	+297.2	16	1.53	0.79	3630
Lloydminster Colony Sand Gas Pool	+134.1	23	1.54	0.70	3260
Marengo Viking Gas Pool	-10.7	21	1.48	1.47	6740
Milton Viking Sand Gas Pool	-18.3	23	1.49	1.42	6550
Pierceland Mannville Sand Gas Pool	+256.0	21	1.56	0.46	2100
Totnes Viking Gas Pool	-3.0	24	1.59	1.50	6830
Whiteside Victoria Sand Gas Pool	+481.6	20	1.53	0.43	2000
Whiteside West Viking Sand Gas Pool	-14.4	27	1.51	1.24	5940

MPR FACTORS



MAXIMUM PERMISSIVE RATE FACTORS

HORIZON POOL CODE	POOL NAME	AVERAGE INTERSTITIAL WATER (SW)	AVERAGE SHRINKAGE FACTOR (I/Boi)	ASSIGNED AREA (LSDS) (A)	(ACRES)
232106	Aberfeldy Sparky Sand	30	90	1	40
433007	Alameda Midale Beds Pool	35	75	2	80
435191	Alameda West Frobisher Beds Pool	35	75	2	80
433036	Alameda West Midale Beds Pool	35	72	2	80
435776	Alida East Alida Beds Pool	35	75	2	80
435777	Alida West Alida Beds Pool	35	77	2	80
239022	Alsask Basal Blairmore Sand Pool	25	75	1	40
314552	Antelope Lake East Roseray Sand Pool	30	93	2	80
331064	Antelope Lake Upper Shaunavon Pool	25	93	2	80
435024	Arcola Frobisher-Alida Beds Pool	35	79	2	80
227331	Avon Hill Viking Pool	35	90	1	40
232135	Baldwinton Sparky Sand Pool	30	90	1	40
430073	Battle Creek Madison Pool	25	90	2	80
331072	Battle Creek Upper Shaunavon Pool	25	90	2	80
314553	Battrum North Roseray Sand Pool	41	97.5	1	40
314546	Battrum Roseray Sand Pool (Upper)	41	97.5	1 & 2	40 & 80
	(Main)	17	97.5	1 & 2	40 & 80
331060	Bench Upper Shaunavon Pool	25	75	4	160
433075	Benson Midale Beds Pool	50	89	2 & 4	80 & 160
238146	Beverley Cantuar Sand Pool	30	90	2	80
238148	Beverley North Cantuar Sand Pool	30	90	2	80
314641	Beverley Upper Roseray Sand Pool	35	90	1	40
433035	Bienfait Midale Beds Pool	35	85	2	80
231202	Big Gully McLaren Sand Pool	30	90	1	40
231309	Big Gully Waseca Sand Pool	30	90	1	40
331050	Bone Creek Upper Shaunavon Pool	15	94	2	80
435019	Browning Frobisher-Alida Beds Pool	35	75	2	80
433089	Bromhead Midale Beds Pool	35	75	4	160
435172	Bryant Frobisher Beds Pool	35	75	4	160
433099	Bryant Midale Beds Pool	35	89	4	160
441422	Buffalo Coulee Bakken Sand Pool	25	93	1/2	20
441428	Buffalo Coulee North Bakken Sand Pool	25	93	1	40
331059	Butte Upper Shaunavon Pool	25	96	2	80
234133	Buzzard Lloydminster Sand Pool	30	90	1	40
441426	Cactus Lake Basal Mannville - Bakken Sand Pool	25	95	1	40
435005	Cantal Frobisher-Alida Beds Pool	35	75	2	80
238143	Cantuar East Cantuar Sand Pool	30	90	2	80
314550	Cantuar East Roseray Sand Pool	35	90	2	80
238141	Cantuar Main Cantuar Sand Pool	30	90	1	40

MAXIMUM PERMISSIVE RATE FACTORS

HORIZON POOL CODE	POOL NAME	AVERAGE INTERSTITIAL WATER (SW)	AVERAGE SHRINKAGE FACTOR (I/Boi)	ASSIGNED AREA (LSDS) (A)	(ACRES)
314741	Cantuar Lower Roseray Sand Pool	35	95	1	40
435180	Carnduff Frobisher Beds Pool	35	75	2	80
433006	Carnduff Midale Beds Pool	35	75	2	80
230903	Celtic Blairmore Sands Pool	30	90	1	40
232122	Celtic Sparky Sand Pool	30	90	1	40
231313	Celtic Waseca Sand Pool	30	90	1	40
435021	Clarilaw Frobisher-Alida Beds Pool	35	75	2	80
330062	Clintonville Shaunavon Pool	25	90	4	160
441421	Coleville Bakken Sand Pool	15	93	1/2	20
230026	Coleville Mannville Sand Pool	25	90	1	40
441429	Coleville South Bakken Sand Pool	15	93	1	40
230027	Coleville South Mannville Sand Pool	25	90	1	40
234122	Cosine Lake Lloydminster Sand Pool	30	90	1	40
441431	Court Bakken Sand Pool	25	95	1	40
331055	Covington Upper Shaunavon Pool	15	94	2	80
331071	Covington West Upper Shaunavon Pool	25	75	4	160
438030	Crystal Hill Souris Valley Beds Pool	40	90	4	160
435028	Dalesboro Frobisher-Alida Beds Pool	35	78	2	80
232125	Dee Valley East Sparky Sand Pool	30	90	1	40
231316	Dee Valley East Waseca Sand Pool	30	90	1	40
321310	Dee Valley Waseca Sand Pool	30	90	1	40
331046	Delta Upper Shaunavon Pool	25	93	2	80
227327	Doddsland Viking Sand Pool	35	90	1	40
331041	Dollard Upper Shaunavon Pool	5	91	4	160
230025	Druid Mannville Sands Pool	30	90	1	40
232109	Dulwich North Sparky Sand Pool	30	90	1/2	20
232102	Dulwich Sparky Sand Pool	30	90	1/4	10
331056	Eastbrook Upper Shaunavon Pool	20	91	2	80
330074	Eastend Shaunavon Pool	20	91	2 & 4	80 & 160
435189	East Pinto Frobisher Beds Pool	35	75	2	80
433033	East Pinto Midale Beds Pool	35	75	2	80
231320	Edam Waseca Sand Pool	30	90	1	40
232512	Edam West G.P. Sand Pool	30	90	1	40
230904	Edam West Mannville Sands Pool	30	90	1	40
232141	Edam West Sparky Sand Pool	30	90	1	40
231323	Edam West Waseca Sand Pool	30	90	1	40
437032	Edenvale Tilston Beds Pool	40	90	2	80
435184	Elmore Frobisher Beds Pool	45	86	2	80
433018	Elmore Midale Beds Pool	35	75	2	80

MAXIMUM PERMISSIVE RATE FACTORS

HORIZON POOL CODE	POOL NAME	AVERAGE INTERSTITIAL WATER (SW)	AVERAGE SHRINKAGE FACTOR (1/Boi)	ASSIGNED AREA (LSDS) (A)	(ACRES)
232504	Epping G.P. Sand Pool	30	90	1/2 & 1	20 & 40
232104	Epping Sparky Sand Pool	30	90	1/2 & 1	20 & 40
227323	Eureka Viking Pool	35	90	1	40
235002	Eyehill Cummings Sand Pool	30	90	1	40
437037	Fertile Tilston Beds Pool	40	90	1	40
432085	Fiat Lake Ratcliffe Beds Pool	35	80	4	160
435187	Florence Frobisher Beds Pool	35	75	2	80
230902	Forest Bank Mannville Sands Pool	30	90	1	40
232123	Forest Bank Sparky Sand Pool	30	90	1	40
231305	Forest Bank Waseca Sand Pool	30	90	1	40
314541	Fosterton Roseray Sand Pool	16	95	1	40
232130	Freemont Sparky Sand Pool	30	90	1	40
231315	Freemont Waseca Sand Pool	30	90	1	40
435082	Freestone Frobisher-Alida Beds Pool	35	75	2	80
432090	Freda Lake Ratcliffe Beds Pool	35	90	4	160
437579	Frys Tilston-Souris Valley Beds Pool	40	90	2	80
232113	Furness Sparky Sand Pool	30	90	1/4	10
441425	Fusilier Bakken Sand Pool	25	95	1	40
435009	Gainsborough Frobisher-Alida Beds Pool	30	75	2	80
433008	Glen Ewen Midale Beds Pool	35	75	4	160
435181	Glen Ewen Frobisher Beds Pool	35	75	4	160
232112	Golden Lake North Sparky Sand Pool	30	90	1	40
231306	Golden Lake North Waseca Sand Pool	30	90	1	40
232107	Golden Lake South Sparky Sand Pool	30	90	1	40
231308	Golden Lake South Waseca Sand Pool	30	90	1	40
435168	Griffin Frobisher Beds Pool	35	89	2	80
238142	Gull Lake Basal Cantuar Sand Pool	35	92	1	40
331058	Gull Lake Central Upper Shaunavon Pool	25	97	2	80
331043	Gull Lake North Upper Shaunavon Pool	25	97	1	40
331057	Gull Lake South Upper Shaunavon Pool	25	97	4	160
231307	Gully Lake Waseca Sand Pool	30	90	1	40
435761	Handsworth Alida Beds Pool	35	75	2	80
435087	Hartaven Frobisher-Alida Beds Pool	40	89	2	80
435190	Hastings East Frobisher Beds Pool	35	75	2	80
435177	Hastings Frobisher Beds Pool	35	75	1 & 2	40 & 80
437027	Hazelwood Tilston Beds Pool	40	90	2	80
314548	Hazlet Roseray Sand Pool	21	94.7	2	80
441430	Hearts Hill Bakken Sand Pool	25	95	1	40
432094	Hoffer Ratcliffe Lower Beds Pool	35	80	4	160

MAXIMUM PERMISSIVE RATE FACTORS

HORIZON POOL CODE	POOL NAME	AVERAGE INTERSTITIAL WATER (SW)	AVERAGE SHRINKAGE FACTOR (1/Boi)	ASSIGNED AREA (LSDS) (ACRES) (A)	
432093	Hoffer Ratcliffe Upper Beds Pool	35	80	4	160
441424	Hoosier Bakken Sand Pool	25	95	1	40
435167	Hume Frobisher Beds Pool	35	89	4	160
433091	Hume Midale Beds Pool	35	89	2 & 4	80 & 160
521029	Hummingbird Birdbear Pool	25	83	2	80
432088	Hummingbird Ratcliffe Beds Pool	25	75	2	80
435163	Huntoon Frobisher Beds Pool	50	89	2 & 4	80 & 160
		35	89	2 & 4	80 & 160
433079	Huntoon Midale Beds Pool	50	89	2 & 4	80 & 160
331054	Illerbrun Upper Shaunavon Pool	15	94	4	160
435003	Ingoldsby Frobisher-Alida Beds Pool	35	89	2	80
435165	Innes Frobisher Beds Pool	35	89	2	80
331049	Instow Upper Shaunavon Pool	5	94	4	160
238160	Java Cantuar Sand Pool	30	90	2	80
331042	Johnston Upper Shaunavon Pool	25	97	1	40
437016	Kenosee Tilston Beds Pool	40	90	2	80
227342	Kerrobert Viking Sand Pool	35	90	1	40
521034	Kisbey Birdbear Pool	40	75	2	80
432086	Lake Alma Ratcliffe Beds Pool	35	80	4	160
231201	Landrose McLaren Sand Pool	30	90	1/2	20
231301	Landrose Waseca Sand Pool	30	90	1/2	20
232129	Lashburn South Sparky Sand Pool	30	90	1	40
231314	Lashburn South Waseca Sand Pool	30	90	1	40
231303	Lashburn Waseca Sand Pool	30	90	1	40
232137	Lashburn West Sparky Sand Pool	30	90	1	40
330047	Leitchville Shaunavon Pool	35	90	4	160
330048	Leon Lake Shaunavon Pool	25	90	4	160
437023	Lightning Tilston Beds Pool	40	90	2	80
232124	Lloydminster Sparky Sand Pool	30	90	1/2	20
232103	Lone Rock Sparky Sand Pool	30	90	1/4	10
435073	Lost Horse Hill Frobisher-Alida Beds Pool	45	89	1 & 2	40 & 80
433081	Lougheed Midale Beds Pool	35	89	2	80
240024	Loverna Detrital Pool	25	75	1	40
231302	Low Lake Waseca Sand Pool	30	90	1/2	20
227335	Lucky Hills Viking Pool	35	90	2	80
441432	Luseland Bakken Sand Pool	25	95	1	40
232126	Macklin Sparky Sand Pool	30	90	1	40
433095	Macoun Midale Beds Pool	35	89	4	160
433069	Macoun West Midale Beds Pool	40	89	4	160

MAXIMUM PERMISSIVE RATE FACTORS

HORIZON POOL CODE	POOL NAME	AVERAGE INTERSTITIAL WATER (SW)	AVERAGE SHRINKAGE FACTOR (I/Boi)	ASSIGNED AREA (LSDS) (A)	(ACRES)
231205	Maidstone McLaren Sand Pool	30	90	1	40
231322	Maidstone Waseca Sand Pool	30	90	1	40
314543	Main Success Roseray Sand Pool	30	93	1	40
232138	Marsden South Sparky Sand Pool	30	90	1	40
232105	Marsden Sparky Sand Pool	30	90	1/4	10
435080	Melrose Frobisher-Alida Beds Pool	45	89	2	80
435161	Midale Central Frobisher Beds Pool	50	89	2	80
433072	Midale Central Midale Beds Pool	50	89	2	80
433070	Minard Midale Beds Pool	35	89	4	160
437014	Moose Mountain Tilston Beds Pool	40	90	2	80
437076	Moose Valley Tilston Beds Pool	40	90	2	80
435031	Morrisview Frobisher-Alida Beds Pool	35	80	2	80
231203	Neilburg McLaren Sand Pool	30	90	1	40
432092	Neptune Ratcliffe Beds Pool	35	80	4	160
433026	North Antler Midale Beds Pool	35	75	2	80
435185	Northgate Frobisher Beds Pool	35	75	4	160
433020	Northgate Midale Beds Pool	35	75	2	80
435762	North Handsworth Alida Beds Pool	35	75	2	80
441423	North Hoosier Bakken Sand Pool	25	95	1	40
239021	North Hoosier Basal Blairmore Sand Pool	25	90	1	40
232509	Northminster North G.P. Sand Pool	30	90	1	40
232134	Northminster North Sparky Sand Pool	30	90	1	40
232108	Northminster Sparky Sand Pool	30	90	1	40
314542	North Premier Roseray Sand Pool	25	93	1	40
331044	North Premier Upper Shaunavon Pool	25	93	1	40
435780	Nottingham Alida Beds Pool	35	75	2	80
		22	75	2	80
435178	Oakley Frobisher Beds Pool	35	75	2	80
432083	Oungre Ratcliffe Beds Pool	35	80	2	80
438022	Parkman Souris Valley Beds Pool	50	90	2	80
437578	Parkman South Tilston-Souris Valley Beds Pool	40	90	2	80
437013	Parkman Tilston Beds Pool	40	90	2	80
437576	Parkman Tilston-Souris Valley Beds Pool	40	90	1	40
		50	90	1	40
331061	Pennant Upper Shaunavon Pool	25	95	2	80
232507	Pikes Peak G.P. Sand Pool	30	90	1	40
232128	Pikes Peak Sparky Sand Pool	30	90	1	40
231312	Pikes Peak Waseca Sand Pool	30	90	1	40
433015	Pinto Midale Beds Pool	35	75	2 & 4	80 & 160

MAXIMUM PERMISSIVE RATE FACTORS

HORIZON POOL CODE	POOL NAME	AVERAGE INTERSTITIAL WATER (SW)	AVERAGE SHRINKAGE FACTOR (1/Boi)	ASSIGNED AREA (LSDS) (A)	(ACRES)
435182	Pinto Frobisher Beds Pool	35	75	2 & 4	80 & 160
227340	Plato North Viking Pool	35	90	1	40
227333	Plato Viking Pool	35	90	1	40
441427	Plover Lake Bakken Sand Pool	25	95	1	40
435010	Queensdale East Frobisher-Alida Beds Pool	35	75	1	40
435782	Queensdale North Alida Beds Pool	35	75	1	40
435781	Queensdale West Alida Beds Pool	35	75	1	40
433097	Ralph Midale Beds Pool	35	89	2	80
331045	Rapdan Upper Shaunavon Pool	20	91	2 & 4	80 & 160
330063	Rapdan West Shaunavon Pool	20	91	4	160
441476	Rocanville Bakken Sand Pool	35	75	1	40
441477	Roncott Bakken Sand Pool	25	94	2	80
435779	Rosebank Alida Beds Pool	35	79	2	80
435778	Rosebank South Alida Beds Pool	35	79	2	80
232140	Rush Lake Sparky Sand Pool	30	90	1	40
231321	Rush Lake Waseca Sand Pool	30	90	1	40
234139	Senlac Lloydminster Sand Pool	30	90	1	40
435164	Sherwood Frobisher Beds Pool	35	86	2	80
432096	Skinner Lake Ratcliffe Beds Pool	35	80	4	160
232101	Silverdale Sparky Sand Pool	30	90	1/4	10
435179	Silverton Frobisher Beds Pool	35	75	2	80
227023	Smiley-Dewar Viking Pool	35	90	1	40
435186	Souris Flat Frobisher Beds Pool	35	75	2	80
437002	South Fletwode Tilston Beds Pool	40	90	2	80
314545	South Success Roseray Sand Pool	30	93	1	40
231311	Standard Hill Waseca Sand Pool	30	90	1	40
435001	Star Valley Frobisher-Alida Beds Pool	35	81	1	40
435176	Steelman Frobisher Beds Pool	35	75	2	80
433004	Steelman Midale Beds Pool	35	72	2	80
436276	Storthoaks Alida-Tilston Beds Pool	35	79	2	80
		40	90	2	80
435078	Stoughton Frobisher-Alida Beds Pool	35	86	2	80
435171	Stoughton South Frobisher Beds Pool	35	86	2	80
314551	Success North Roseray Sand Pool	30	93	2	80
314544	Success Roseray Sand Alpha Pool	30	93	1	40
314549	Suffield Roseray Sand Pool	35	95	1 & 2	40 & 80
331052	Suffield Upper Shaunavon Pool	25	97	2	80
231204	Tangleflags East McLaren Sand Pool	30	90	1	40
232505	Tangleflags G.P. Sand Pool	30	90	1	40

MAXIMUM PERMISSIVE RATE FACTORS

HORIZON POOL CODE	POOL NAME	AVERAGE INTERSTITIAL WATER (SW)	AVERAGE SHRINKAGE FACTOR (1/Boi)	ASSIGNED AREA (LSDS) (A)	(ACRES)
234121	Tangleflags Lloydminster Sand Pool	30	90	1	40
230901	Tangleflags Mannville Sands Pool	30	90	1	40
235004	Tangleflags North Cummings Sand Pool	30	90	1	40
232506	Tangleflags North G.P. Sand Pool	30	90	1	40
234127	Tangleflags North Lloydminster Sand Pool	30	90	1	40
232114	Tangleflags Sparky Sand Pool	30	90	1	40
232508	Tangleflags West G.P. Sand Pool	30	90	1	40
234132	Tangleflags West Lloydminster Sand Pool	30	90	1	40
232131	Tangleflags West Sparky Sand Pool	30	90	1	40
433098	Tatagwa Midale Beds Pool	35	92	2	80
314547	Verlo Roseray Sand Pool	21	90	2	80
435170	Viewfield Frobisher Beds Pool	35	86	2	80
433071	Viewhill Midale Beds Pool	50	89	4	160
238661	Wapella Sand Pool	25	99	1	40
435784	Warmley Alida Beds Pool	35	90	2	80
436277	Wauchope Alida-Tilston Beds Pool	35	75	2	80
435189	Weir Hill Frobisher Beds Pool	35	75	2	80
232510	Westhazel G.P. Sand Pool	30	90	1	40
232136	Westhazel Sparky Sand Pool	30	90	1	40
435166	West Innes Frobisher Beds Pool	35	89	2	80
433077	West Kingsford Midale Beds Pool	35	83.6	2	80
435162	Weyburn Frobisher Beds Pool	35	89	2	80
433074	Weyburn Midale Beds Pool	35	89	2	80
		50	89	2	80
435160	Weyburn North Frobisher Beds Pool	50	89	2	80
433068	Weyburn North Midale Beds Pool	50	89	2	80
437012	White Bear Tilston Beds Pool	40	90	2	80
437577	White Bear Tilston-Souris Valley Beds Pool	40	90	1	40
		50	90	1	40
331051	Whitemud Upper Shaunavon Pool	20	91	1	40
227326	Whiteside Viking Sand Pool	40	91	1	40
435783	Wildwood Alida Beds Pool	35	75	2	80
435011	Willmar Frobisher-Alida Beds Pool	25	78	2	80
435188	Winmore Frobisher Beds Pool	45	85	2	80
235007	Winter Cummings Sand Pool	30	90	1	40
435183	Workman Frobisher Beds Pool	35	84	2	80
433017	Workman Midale Beds Pool	35	79	2	80

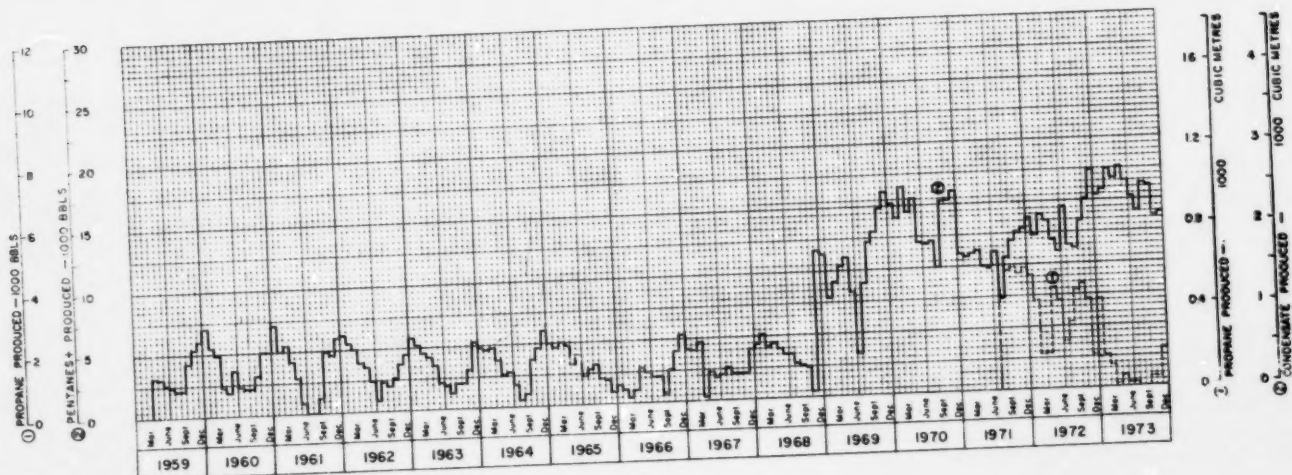
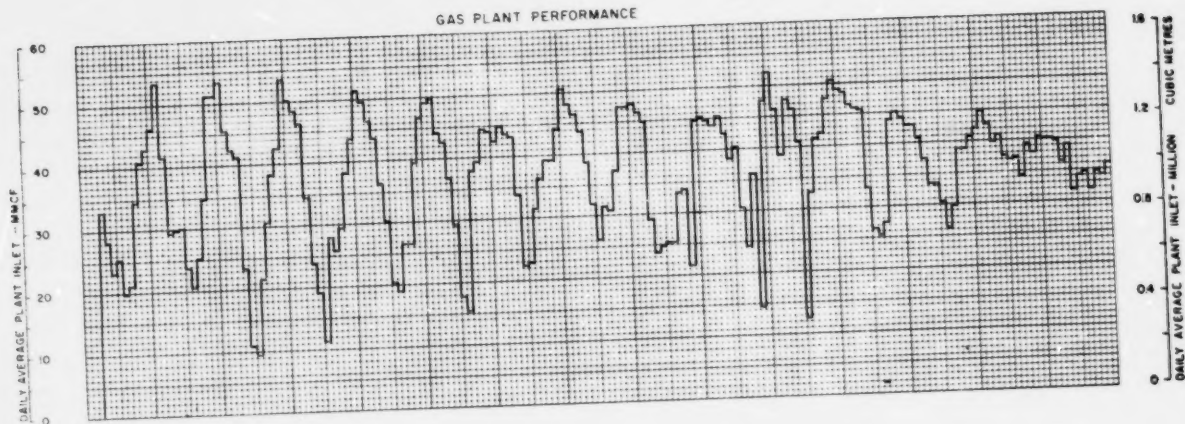
GAS PLANT

PERFORMANCE GRAPHS



COLEVILLE GAS PLANT

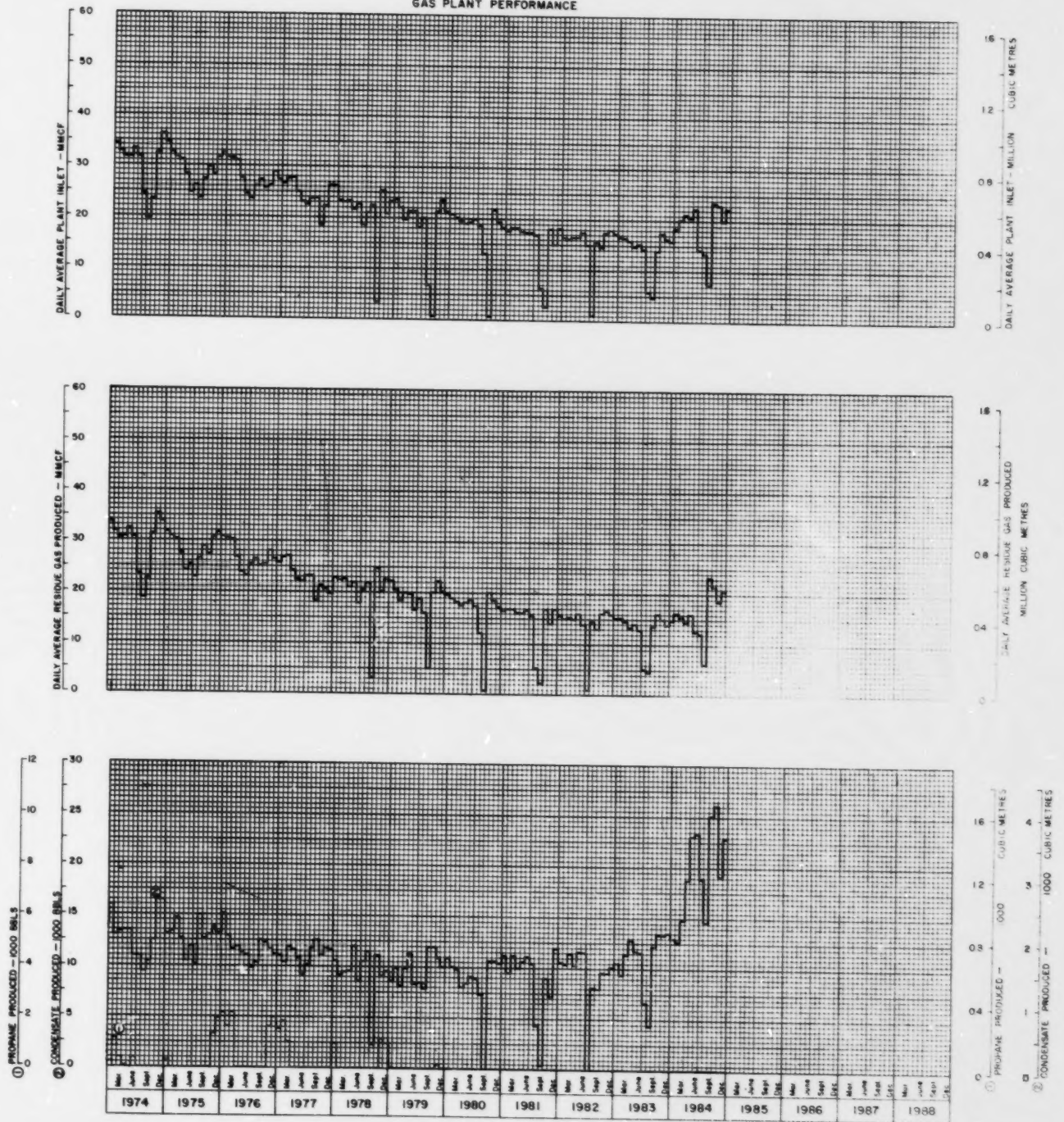
GAS PLANT PERFORMANCE





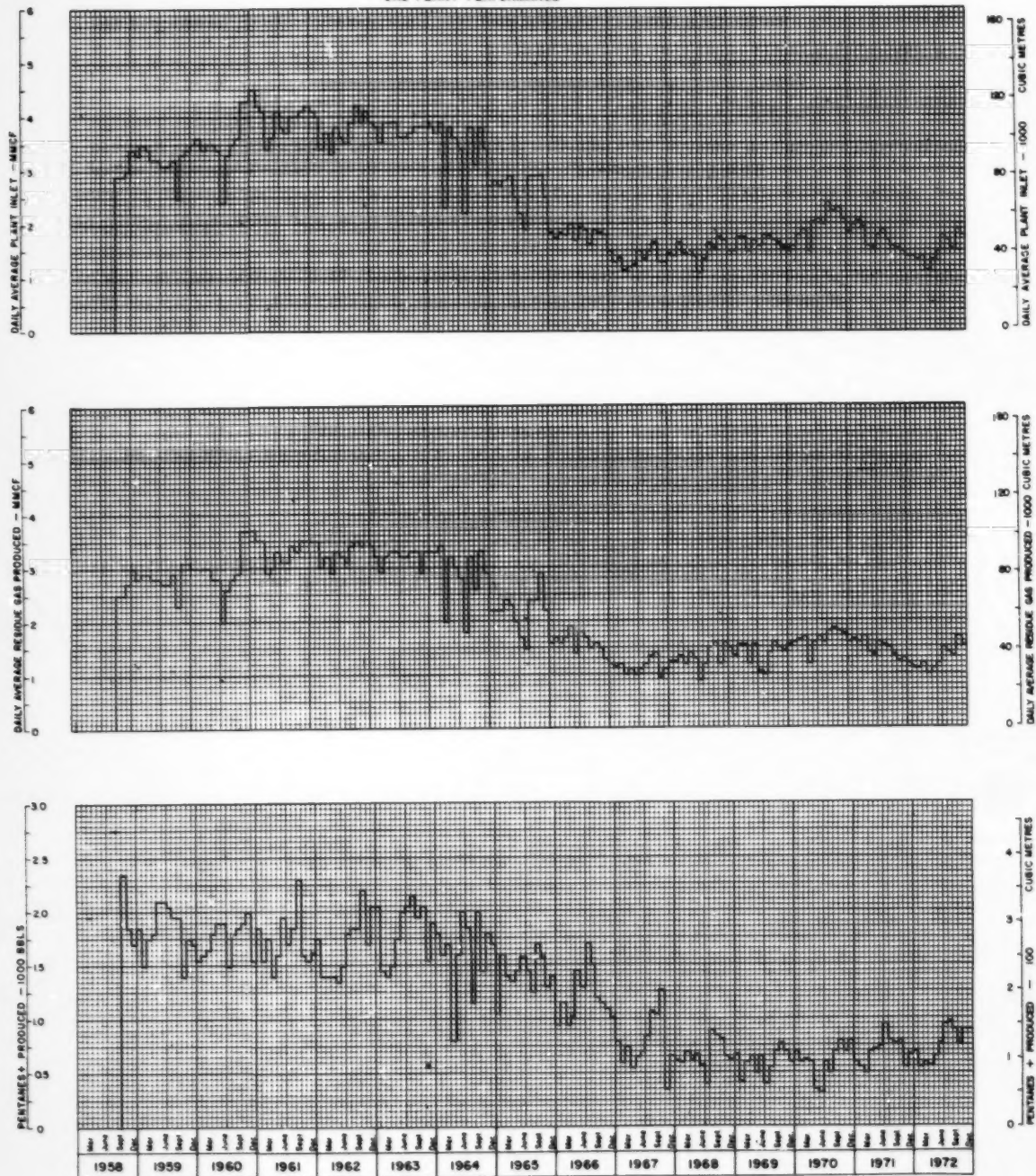
COLEVILLE GAS PLANT

GAS PLANT PERFORMANCE



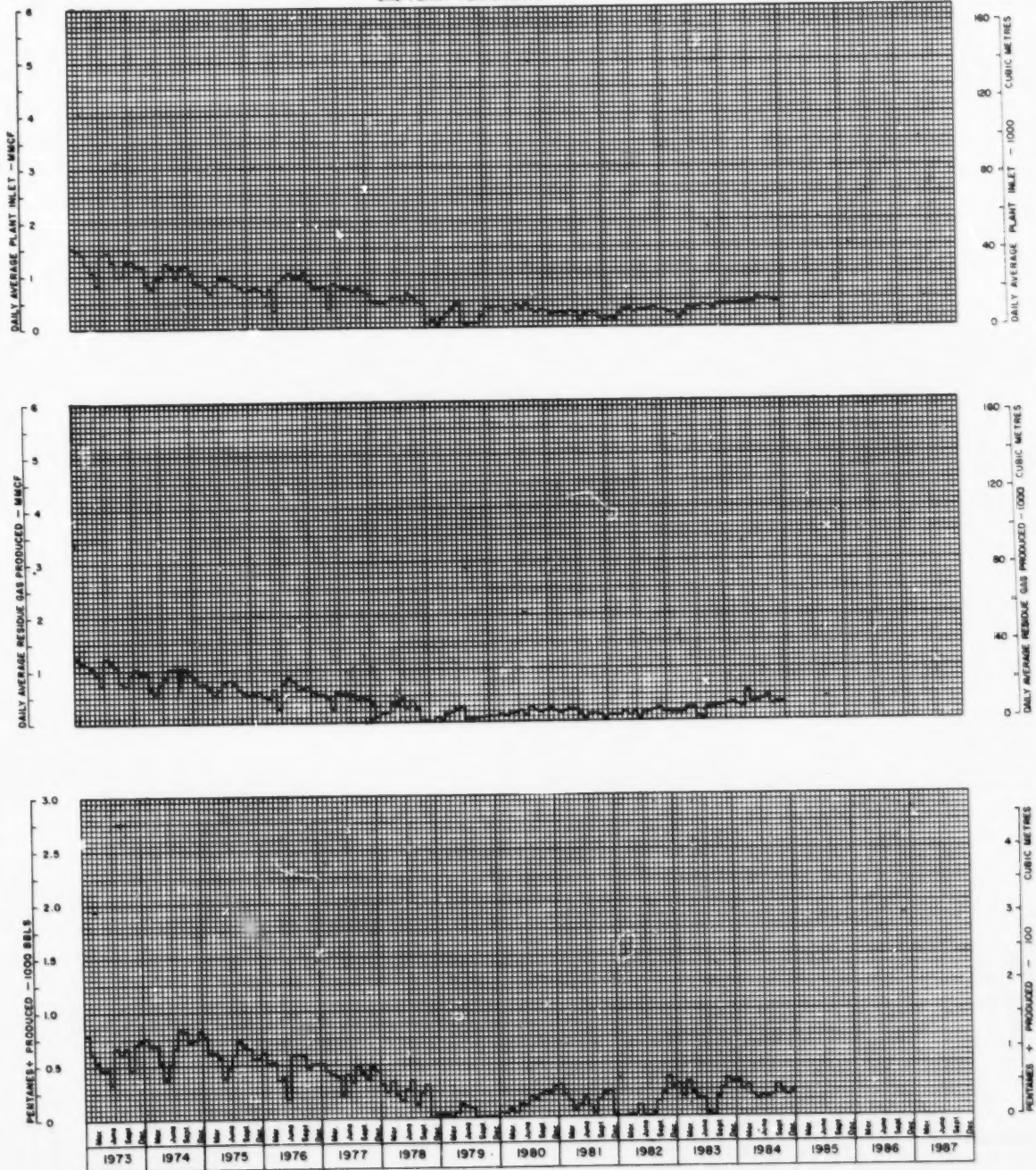
SMILEY GAS CONSERVATION PLANT SMILEY-DEWAR VIKING SAND

GAS PLANT PERFORMANCE



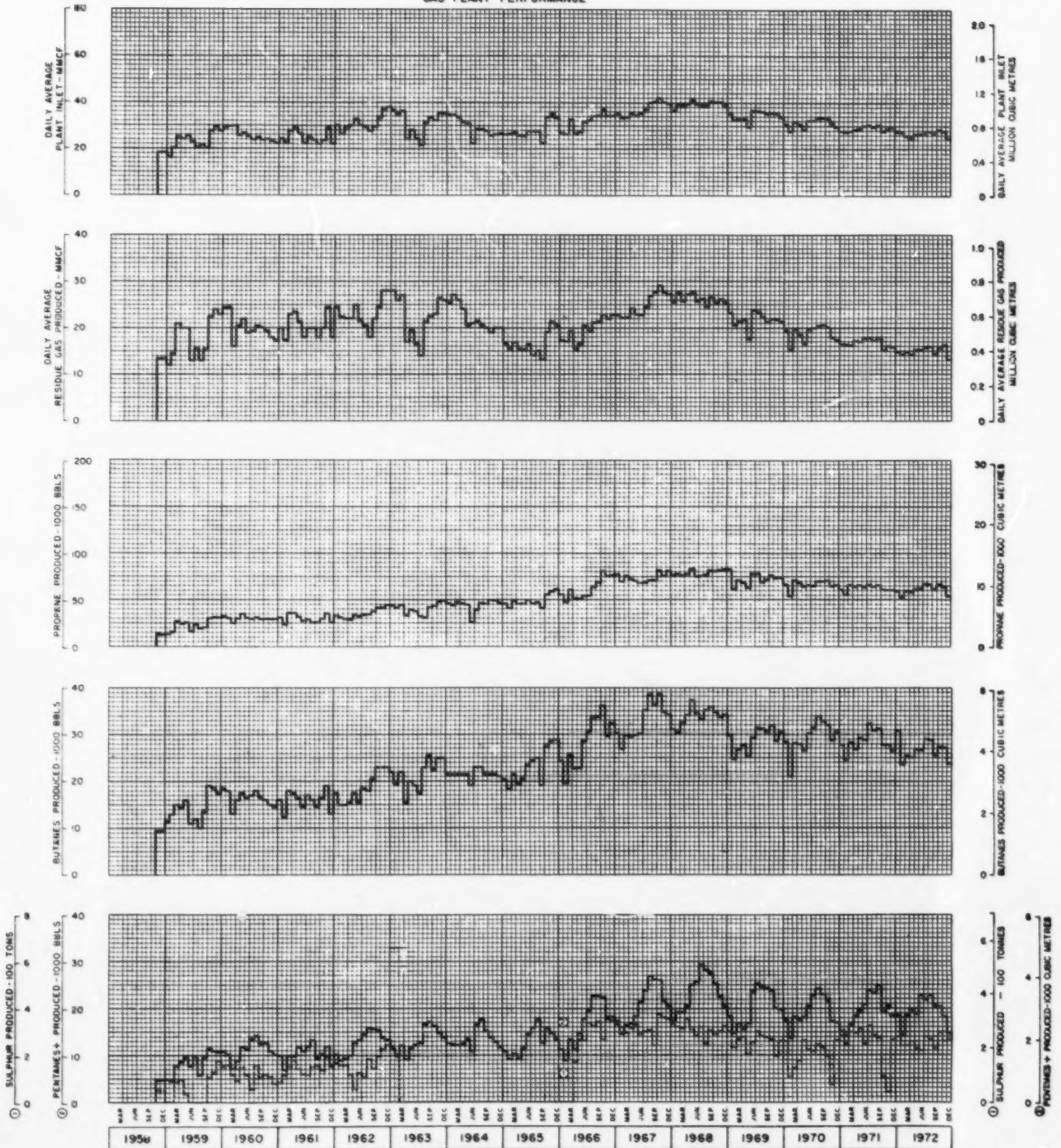
SMILEY GAS CONSERVATION PLANT SMILEY-DEWAR VIKING SAND

GAS PLANT PERFORMANCE

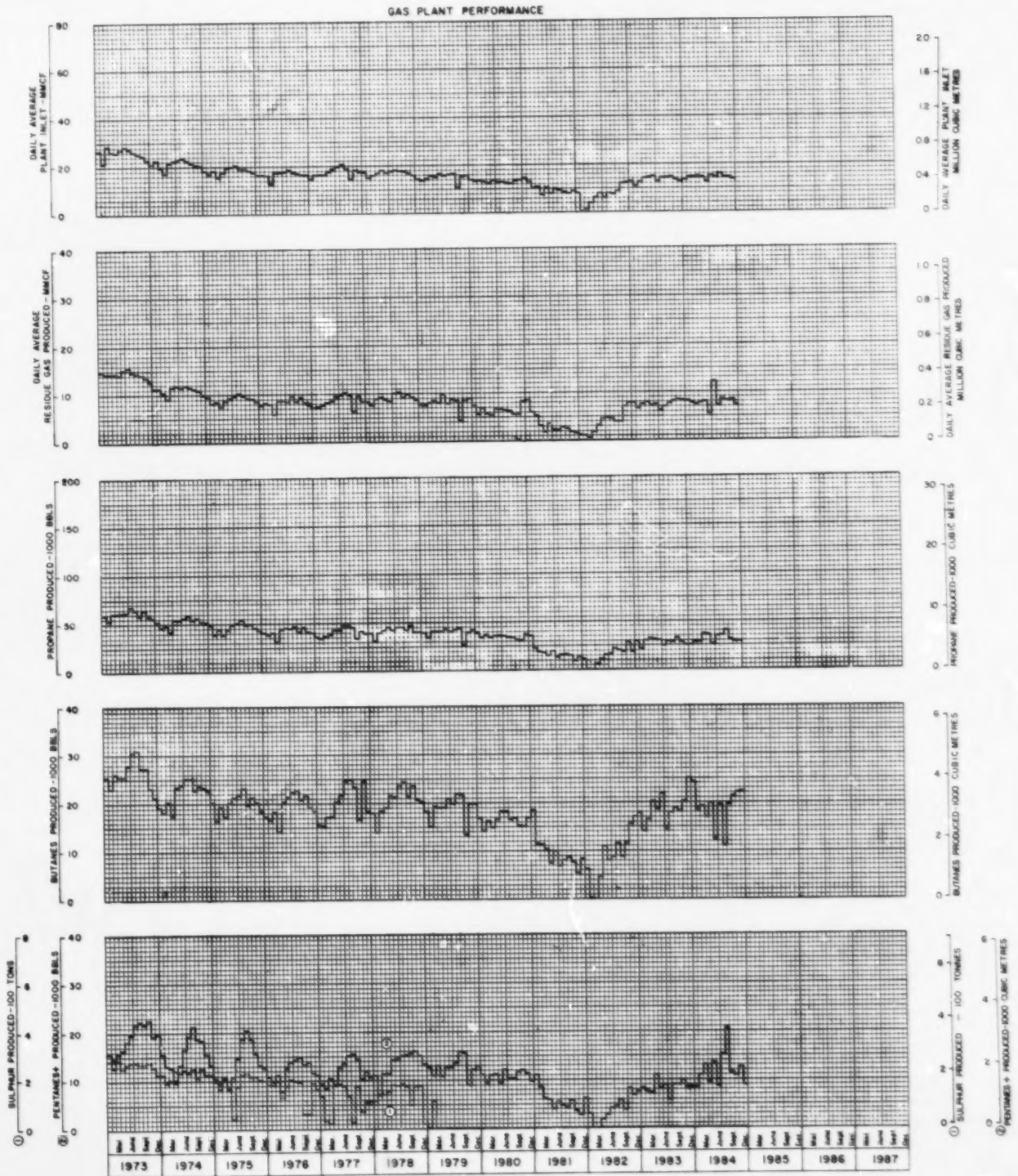


STEELMAN GAS PLANT

GAS PLANT PERFORMANCE



STEELMAN GAS PLANT



FORMATION WATER

RESISTIVITY



RESISTIVITY OF FORMATION WATERS @ 20°C

AREA TWP RGE MER	FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES	AREA TWP RGE MER	FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES
1 30 W1	FROBISHER	1	0.059	0.059	24 31 W1	SOURIS VALLEY	1	0.104	0.104
2 30 W1	MANNVILLE	1	1.000	1.000	25 31 W1	WINNIPEG	1	0.047	0.047
	FROBISHER	1	0.057	0.057					
	FROBISHER-ALIDA	11	0.047 - 0.060	0.054	1 32 W1	MIDALE	5	0.068 - 0.076	0.072
3 30 W1	FROBISHER-ALIDA	3	0.044 - 0.064	0.054		FROBISHER	10	0.044 - 0.060	0.051
	ALIDA	8	0.044 - 0.066	0.057	2 32 W1	MANNVILLE	3	0.950 - 0.970	0.958
	TILSTON	1	0.063	0.063		MIDALE	1	0.070	0.070
	SOURIS VALLEY	2	0.055 - 0.066	0.061		FROBISHER	2	0.040 - 0.049	0.045
	BIRDBEAR	1	0.057	0.057		FROBISHER-ALIDA	1	0.040	0.040
4 30 W1	TILSTON	1	0.078	0.078	3 32 W1	FROBISHER	2	0.044 - 0.047	0.046
5 30 W1	TILSTON	1	0.170	0.170		BIRDBEAR	1	0.070	0.070
6 30 W1	TILSTON	2	0.115 - 0.120	0.118		DUPEROW	2	0.061 - 0.064	0.063
	SOURIS VALLEY	2	0.160	0.160		SOURIS RIVER	1	0.058	0.058
7 30 W1	SOURIS VALLEY	1	0.210	0.210		SILURIAN	2	0.066	0.066
9 30 W1	SOURIS VALLEY	2	0.160 - 0.182	0.171		WINNIPEG	1	0.060	0.060
10 30 W1	MANNVILLE	1	0.302	0.302	4 32 W1	MANNVILLE	2	0.870 - 0.890	0.880
	SOURIS VALLEY	1	0.228	0.228		JURASSIC	1	0.320	0.320
16 30 W1	BAKKEN	1	0.184	0.184		GRAVELBOURG	1	0.200	0.200
17 30 W1	INTERLAKE	2	0.033 - 0.035	0.034		FROBISHER	1	0.047	0.047
	STONY MOUNTAIN-					FROBISHER-ALIDA	2	0.047 - 0.048	0.048
	RED RIVER	1	0.045	0.045		ALIDA	9	0.047 - 0.070	0.058
	WINNIPEG	4	0.037 - 0.070	0.047		SOURIS VALLEY	1	0.055	0.055
20 30 W1	BAKKEN	1	0.680	0.680	5 32 W1	FROBISHER-ALIDA	5	0.057 - 0.070	0.064
26 30 W1	DUPEROW	1	0.300	0.300		ALIDA	12	0.047 - 0.067	0.058
1 31 W1	MANNVILLE	4	0.957 - 1.070	1.019		TILSTON	2	0.056 - 0.057	0.057
	MIDALE	6	0.063 - 0.078	0.074	6 32 W1	TILSTON	5	0.052 - 0.077	0.060
	FROBISHER	9	0.041 - 0.056	0.048		BIRDBEAR	1	0.060	0.060
2 31 W1	FROBISHER	5	0.050 - 0.075	0.064		SOURIS RIVER	1	0.060	0.060
	FROBISHER-ALIDA	2	0.052 - 0.066	0.059		WINNIPEGOSIS	1	0.060	0.060
	ALIDA	1	0.060	0.060		INTERLAKE	2	0.060	0.060
3 31 W1	FROBISHER	4	0.043 - 0.059	0.051	7 32 W1	TILSTON	7	0.047 - 0.092	0.075
	FROBISHER-ALIDA	8	0.049 - 0.076	0.061		TILSTON-SOURIS VALLEY	1	0.076	0.076
4 31 W1	FROBISHER-ALIDA	14	0.042 - 0.069	0.050	8 32 W1	TILSTON	1	0.094	0.094
	ALIDA	18	0.053 - 0.078	0.066		SOURIS VALLEY	2	0.100 - 0.102	0.101
	TILSTON	3	0.046 - 0.070	0.060		INTERLAKE	2	0.046 - 0.047	0.047
5 31 W1	FROBISHER-ALIDA	2	0.060 - 0.066	0.063	9 32 W1	SOURIS VALLEY	3	0.131 - 0.180	0.160
	ALIDA-TILSTON	2	0.048 - 0.059	0.054	16 32 W1	BAKKEN	1	0.260	0.260
	TILSTON	3	0.055 - 0.070	0.064	17 32 W1	BAKKEN	3	0.187 - 0.310	0.246
6 31 W1	TILSTON	2	0.095 - 0.097	0.096		WINNIPEGOSIS	1	0.053	0.053
7 31 W1	SOURIS VALLEY	3	0.110 - 0.120	0.113		INTERLAKE	1	0.052	0.052
9 31 W1	SOURIS VALLEY	1	0.152	0.152		WINNIPEG	1	0.052	0.052
12 31 W1	VIKING	1	0.400	0.400	29 32 W1	SOURIS RIVER	1	0.150	0.150
	GRAVELBOURG	1	0.800	0.800		SOURIS RIVER-	1	0.093	0.093
	SOURIS VALLEY	1	0.300	0.300		DAWSON BAY	2	0.078 - 0.094	0.086
	BIRDBEAR	1	0.090	0.090		DAWSON BAY			
14 31 W1	SOURIS VALLEY	1	0.228	0.228	1 33 W1	MIDALE	2	0.077 - 0.078	0.078
15 31 W1	MANNVILLE	2	0.600 - 0.620	0.610		FROBISHER	6	0.043 - 0.059	0.050
	GRAVELBOURG	1	0.340	0.340	2 33 W1	MANNVILLE	1	0.843	0.843
	SOURIS VALLEY	1	0.058	0.058		MIDALE	22	0.051 - 0.094	0.078
16 31 W1	BAKKEN	7	0.200 - 0.235	0.220		FROBISHER-ALIDA	4	0.047 - 0.060	0.054
17 31 W1	BAKKEN	1	0.182	0.182	3 33 W1	RAVENSCRAIG	1	2.400	2.400
						FROBISHER	3	0.049 - 0.061	0.054
						FROBISHER-ALIDA	4	0.044 - 0.058	0.052
					4 33 W1	FROBISHER	8	0.047 - 0.052	0.049
						FROBISHER-ALIDA	13	0.049 - 0.080	0.063
					5 33 W1	MANNVILLE	2	0.780 - 0.920	0.850
						RIERDON	2	0.270 - 0.370	0.320
						GRAVELBOURG	1	0.320	0.320
						KISBEY	1	0.070	0.070

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA TWP RGE MER	FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES	AREA TWP RGE MER	FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES
5 33 W1	FROBISHER-ALIDA	7	0.047 - 0.070	0.059	6 1 W2	FROBISHER-ALIDA	22	0.045 - 0.058	0.050
	ALIDA	11	0.046 - 0.068	0.054		ALIDA	1	0.048	0.048
	ALIDA-TILSTON	1	0.055	0.055	7 1 W2	ALIDA	1	0.052	0.052
	BIRDBEAR	1	0.050	0.050		TILSTON	3	0.055 - 0.060	0.058
6 33 W1	FROBISHER-ALIDA	6	0.055 - 0.075	0.063	9 1 W2	TILSTON	11	0.072 - 0.094	0.082
	ALIDA	11	0.047 - 0.060	0.054		SOURIS VALLEY	1	0.102	0.102
	TILSTON	2	0.053 - 0.057	0.055	10 1 W2	TILSTON	3	0.081 - 0.086	0.083
7 33 W1	TILSTON	2	0.051 - 0.062	0.057		SOURIS VALLEY	5	0.082 - 0.140	0.096
8 33 W1	TILSTON	4	0.086 - 0.124	0.110	11 1 W2	SOURIS VALLEY	2	0.190 - 0.220	0.205
	TILSTON-SOURIS	4	0.084 - 0.108	0.094	14 1 W2	MANNVILLE	2	0.390 - 0.530	0.510
	VALLEY	2	0.105 - 0.158	0.132		JURASSIC	12	0.220 - 0.560	0.380
	SOURIS VALLEY	1	0.056	0.056	15 1 W2	GRAVELBOURG	1	0.310	0.310
	WINNIPEGOSIS	1			16 1 W2	MANNVILLE	1	0.490	0.490
9 33 W1	TILSTON	9	0.093 - 0.131	0.114		JURASSIC	1	0.290	0.290
	TILSTON-SOURIS	5	0.125 - 0.148	0.136	1 2 W2	RATCLIFFE	1	0.047	0.047
	VALLEY	13	0.105 - 0.148	0.131		MIDALE	1	0.044	0.044
	SOURIS VALLEY					FROBISHER	4	0.034 - 0.052	0.044
14 33 W1	MANNVILLE	1	0.302	0.302		FROBISHER-ALIDA	2	0.045	0.045
	JURASSIC	1	0.316	0.316		BIRDBEAR	1	0.052	0.052
20 33 W1	MANNVILLE	2	0.240 - 0.265	0.253	2 2 W2	RATCLIFFE	2	0.051 - 0.060	0.056
	SOURIS RIVER	1	0.049	0.049		FROBISHER	1	0.054	0.054
26 33 W1	WINNIPEG	1	0.048	0.048		INTERLAKE	1	0.048	0.048
1 34 W1	MIDALE	4	0.069 - 0.070	0.070		RED RIVER	1	0.047	0.047
	FROBISHER	2	0.045	0.045		DEADWOOD	1	0.046	0.046
2 34 W1	MIDALE	34	0.045 - 0.092	0.069	3 2 W2	MANNVILLE	7	0.414 - 0.700	0.567
	FROBISHER	11	0.042 - 0.057	0.048		MIDALE	30	0.045 - 0.070	0.057
	FROBISHER-ALIDA	8	0.044 - 0.054	0.049		FROBISHER	10	0.044 - 0.060	0.051
3 34 W1	FROBISHER	7	0.039 - 0.060	0.050	4 2 W2	FROBISHER	8	0.052 - 0.062	0.055
	FROBISHER-ALIDA	4	0.040 - 0.045	0.044	5 2 W2	FROBISHER	6	0.051 - 0.062	0.058
4 34 W1	MANNVILLE	2	0.690 - 0.750	0.720		FROBISHER-ALIDA	2	0.047 - 0.051	0.049
	FROBISHER	5	0.046 - 0.052	0.048	6 2 W2	FROBISHER	3	0.046 - 0.053	0.048
	FROBISHER-ALIDA	11	0.040 - 0.050	0.046		FROBISHER-ALIDA	5	0.047 - 0.061	0.054
5 34 W1	FROBISHER	9	0.046 - 0.064	0.053		KISBEY	1	0.042	0.042
	FROBISHER-ALIDA	10	0.045 - 0.070	0.054		ALIDA	2	0.046 - 0.056	0.051
6 34 W1	FROBISHER-ALIDA	8	0.048 - 0.060	0.052	7 2 W2	ALIDA	2	0.053 - 0.054	0.054
	ALIDA	1	0.056	0.056		ALIDA-TILSTON	1	0.050	0.050
9 34 W1	TILSTON	2	0.092 - 0.159	0.126	8 2 W2	TILSTON	1	0.053	0.053
	TILSTON-SOURIS	1	0.098	0.098	9 2 W2	TILSTON	1	0.067	0.067
	VALLEY	1	0.086	0.086		SOURIS VALLEY	1	0.068	0.068
	SOURIS VALLEY				10 2 W2	TILSTON	7	0.083 - 0.116	0.092
11 34 W1	MADISON (UNDIFF)	1	0.240	0.240		SOURIS VALLEY	3	0.083 - 0.164	0.113
	BIRDBEAR	1	0.071	0.071		BIRDBEAR	1	0.053	0.053
2 1 W2	RATCLIFFE	1	0.060	0.060	11 2 W2	SOURIS VALLEY	1	0.205	0.205
	MIDALE	6	0.051 - 0.075	0.066		BIRDBEAR	1	0.077	0.077
	FROBISHER	2	0.058 - 0.059	0.059	12 2 W2	WINNIPEGOSIS	1	0.047	0.047
	FROBISHER-ALIDA	2	0.040 - 0.049	0.045	18 2 W2	JURASSIC	1	0.205	0.205
3 1 W2	MANNVILLE	1	0.704	0.704	21 2 W2	RED RIVER	1	0.037	0.037
	MIDALE	23	0.046 - 0.077	0.064		WINNIPEG	1	0.039	0.039
	FROBISHER	12	0.040 - 0.054	0.046	1 3 W2	MIDALE	5	0.044 - 0.047	0.045
	FROBISHER-ALIDA	9	0.044 - 0.052	0.049		FROBISHER	1	0.044	0.044
4 1 W2	FROBISHER	21	0.040 - 0.055	0.049		FROBISHER-ALIDA	1	0.052	0.052
	FROBISHER-ALIDA	12	0.041 - 0.051	0.045	2 3 W2	MANNVILLE	2	0.700 - 0.840	0.770
5 1 W2	MANNVILLE	2	0.790 - 0.840	0.815		RATCLIFFE	1	0.070	0.070
	RIERDON	3	0.300 - 0.350	0.333					
	FROBISHER	1	0.048	0.048					
	FROBISHER-ALIDA	4	0.046 - 0.060	0.053					
	ALIDA	1	0.049	0.049					
	BIRDBEAR	1	0.048	0.048					

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES		AVERAGE RESISTIVITY OHM-METRES	AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES		AVERAGE RESISTIVITY OHM-METRES	
TWP	RGE	MER			OHM-METRES	OHM-METRES		TWP	RGE	MER			OHM-METRES	OHM-METRES		
2	3	W2	MIDALE	1	0.049	0.049										
			FROBISHER	5	0.035 - 0.047	0.042		4	4	W2	MANNVILLE	2	0.321 - 0.380	0.351		
3	3	W2	MANNVILLE	1	0.398	0.398					MIDALE	12	0.050 - 0.063	0.054		
			MIDALE	9	0.053 - 0.067	0.061					FROBISHER	8	0.047 - 0.055	0.050		
			FROBISHER	4	0.046 - 0.062	0.055					FROBISHER-ALIDA	2	0.044 - 0.070	0.057		
			FROBISHER-ALIDA	1	0.058	0.058					BIRDBEAR	1	0.045	0.045		
4	3	W2	MIDALE	1	0.046	0.046		5	4	W2	MIDALE	12	0.046 - 0.086	0.062		
			FROBISHER	3	0.044 - 0.060	0.053					FROBISHER	2	0.056 - 0.063	0.060		
			FROBISHER-ALIDA	1	0.055	0.055					FROBISHER-ALIDA	1	0.046	0.046		
5	3	W2	FROBISHER	6	0.050 - 0.060	0.057		6	4	W2	FROBISHER	3	0.052 - 0.058	0.055		
			FROBISHER-ALIDA	5	0.040 - 0.060	0.048					FROBISHER-ALIDA	3	0.053 - 0.061	0.057		
			TILSTON	1	0.060	0.060		7	4	W2	FROBISHER	2	0.052	0.052		
			BIRDBEAR	1	0.060	0.060					FROBISHER-ALIDA	4	0.044 - 0.073	0.054		
			STONY MOUNTAIN	1	0.060	0.060					KISBEY	1	0.050	0.050		
6	3	W2	MANNVILLE	2	0.354 - 0.550	0.452					ALIDA	1	0.052	0.052		
			FROBISHER	2	0.052 - 0.066	0.059		8	4	W2	FROBISHER-ALIDA	1	0.052	0.052		
			FROBISHER-ALIDA	5	0.049 - 0.060	0.055					BIRDBEAR	1	0.056	0.056		
			ALIDA	1	0.060	0.060		9	4	W2	ALIDA	2	0.053 - 0.062	0.058		
8	3	W2	LOWER WATROUS	1	0.048	0.048		10	4	W2	ALIDA-TILSTON	1	0.063	0.063		
			ALIDA	3	0.051 - 0.064	0.058					TILSTON	2	0.073 - 0.075	0.074		
			ALIDA-TILSTON	1	0.062	0.062		11	4	W2	TILSTON	8	0.093 - 0.148	0.125		
9	3	W2	TILSTON	4	0.057 - 0.092	0.066		12	4	W2	TILSTON	1	0.169	0.169		
10	3	W2	TILSTON	3	0.070 - 0.116	0.090		16	4	W2	JURASSIC	1	0.126	0.126		
11	3	W2	SOURIS VALLEY	1	0.160	0.160		19	4	W2	SOURIS VALLEY	1	0.093	0.093		
17	3	W2	MANNVILLE	1	0.297	0.297		1	5	W2	MIDALE	5	0.043 - 0.054	0.048		
18	3	W2	JURASSIC	3	0.214 - 0.332	0.282					FROBISHER	1	0.041	0.041		
19	3	W2	SOURIS VALLEY	1	0.136	0.136					FROBISHER-ALIDA	3	0.047 - 0.056	0.051		
			DUPEROW	1	0.085	0.085		2	5	W2	MIDALE	4	0.045 - 0.053	0.049		
22	3	W2	JURASSIC	1	0.240	0.240					FROBISHER	2	0.041 - 0.046	0.044		
			SOURIS VALLEY	1	0.150	0.150		3	5	W2	MANNVILLE	2	0.345 - 0.358	0.352		
			DUPEROW	1	0.068	0.068					MIDALE	28	0.045 - 0.054	0.049		
			SOURIS RIVER	1	0.055	0.055					FROBISHER	9	0.043 - 0.068	0.053		
			DAWSON BAY	1	0.060	0.060		4	5	W2	MANNVILLE	9	0.323 - 0.519	0.390		
25	3	W2	BIRDBEAR	1	0.188	0.188					JURASSIC	1	0.390	0.390		
1	4	W2	MANNVILLE	1	0.294	0.294					RATCLIFFE	1	0.078	0.078		
			MIDALE	3	0.042 - 0.045	0.043					MIDALE	57	0.046 - 0.069	0.058		
			FROBISHER	5	0.040 - 0.070	0.051					FROBISHER	16	0.044 - 0.065	0.054		
			FROBISHER-ALIDA	1	0.052	0.052					FROBISHER-ALIDA	3	0.048 - 0.052	0.050		
2	4	W2	MANNVILLE	2	0.390 - 0.570	0.480					ALIDA	1	0.055	0.055		
			GRAVELBOURG	1	0.188	0.188					BIRDBEAR	1	0.045	0.045		
			POPLAR	1	0.070	0.070					SOURIS RIVER	1	0.043	0.043		
			MIDALE	4	0.040 - 0.048	0.045					WINNIPEGOSIS	1	0.044	0.044		
			FROBISHER	8	0.042 - 0.052	0.045		5	5	W2	MIDALE	22	0.058 - 0.097	0.072		
			FROBISHER-ALIDA	1	0.049	0.049					FROBISHER	8	0.046 - 0.064	0.055		
			BIRDBEAR	1	0.046	0.046		6	5	W2	FROBISHER	11	0.054 - 0.077	0.060		
			DUPEROW	1	0.074	0.074					FROBISHER-ALIDA	2	0.048 - 0.055	0.052		
			WINNIPEGOSIS	1	0.046	0.046		7	5	W2	FROBISHER	2	0.055 - 0.062	0.059		
			INTERLAKE	1	0.046	0.046					FROBISHER-ALIDA	2	0.053 - 0.056	0.055		
			STONY MOUNTAIN	1	0.048	0.048					ALIDA	3	0.071 - 0.088	0.078		
			WINNIPEG	1	0.048	0.048					TILSTON	1	0.068	0.068		
3	4	W2	VIKING	1	0.450	0.450		8	5	W2	MANNVILLE	1	0.260	0.260		
			MANNVILLE	6	0.325 - 0.920	0.497		9	5	W2	ALIDA	2	0.057 - 0.075	0.066		
			JURASSIC	2	0.410 - 0.440	0.425		10	5	W2	FROBISHER	1	0.066	0.066		
			MIDALE	45	0.041 - 0.082	0.050					ALIDA	1	0.066	0.066		
			FROBISHER	5	0.048 - 0.050	0.049					BIRDBEAR	1	0.054	0.054		
			FROBISHER-ALIDA	3	0.044 - 0.060	0.053		11	5	W2	TILSTON	4	0.120 - 0.207	0.142		
			BIRDBEAR	1	0.061	0.061										
			DUPEROW	2	0.049	0.049										
			INTERLAKE	1	0.044	0.044										
			RED RIVER	1	0.049	0.049										
			DEADWOOD	2	0.046	0.046										

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES		AVERAGE RESISTIVITY OHM-METRES	AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES		AVERAGE RESISTIVITY OHM-METRES
TWP	RGE	MER			OHM-METRES			TWP	RGE	MER			OHM-METRES		
12	5	W2	SOURIS VALLEY	1	0.158		0.158	8	7	W2	FROBISHER	1	0.065		0.065
24	5	W2	SOURIS VALLEY	1	0.139		0.139	9	7	W2	MANNVILLE	1	0.153		0.153
26	5	W2	TORQUAY	1	0.150		0.150				FROBISHER-ALIDA	6	0.046 - 0.056		0.053
27	5	W2	VIKING	1	0.910		0.910				ALIDA	4	0.087 - 0.116		0.098
1	6	W2	FROBISHER	1	0.047		0.047	10	7	W2	FROBISHER-ALIDA	5	0.100 - 0.120		0.108
2	6	W2	FROBISHER-ALIDA	1	0.080		0.080				TILSTON	5	0.078 - 0.096		0.086
			DUPEROW	2	0.054 - 0.136		0.095				BIRDBEAR	5	0.095 - 0.153		0.112
3	6	W2	POPLAR	1	0.060		0.060					1	0.078		0.078
			MIDALE	1	0.060		0.060	11	7	W2	ALIDA	1	0.090		0.090
			FROBISHER	1	0.060		0.060				TILSTON	3	0.112 - 0.128		0.118
4	6	W2	MANNVILLE	3	0.251 - 0.266		0.256	13	7	W2	TILSTON	1	0.194		0.194
			MIDALE	28	0.047 - 0.094		0.070	16	7	W2	JURASSIC	2	0.175 - 0.183		0.179
			FROBISHER	52	0.031 - 0.087		0.048				SOURIS VALLEY	1	0.478		0.478
5	6	W2	VIKING	1	0.375		0.375	19	7	W2	VIKING	1	0.570		0.570
			MANNVILLE	4	0.120 - 0.620		0.375	21	7	W2	JURASSIC	1	0.102		0.102
			JURASSIC	2	0.275 - 0.320		0.298	27	7	W2	DAWSON BAY	1	0.061		0.061
			RATCLIFFE	1	0.091		0.091	29	7	W2	VIKING	1	0.320		0.320
			MIDALE	16	0.054 - 0.094		0.074				INTERLAKE	1	0.056		0.056
			FROBISHER	6	0.048 - 0.070		0.060	1	8	W2	FROBISHER	1	0.052		0.052
			TILSTON	1	0.062		0.062	2	8	W2	MIDALE	1	0.062		0.062
6	6	W2	MIDALE	1	0.062		0.062	3	8	W2	POPLAR	1	0.060		0.060
			BIRDBEAR	2	0.054 - 0.056		0.055				MIDALE	1	0.060		0.060
			WINNIPEGOSIS	1	0.053		0.053				DUPEROW	2	0.060		0.060
7	6	W2	FROBISHER	3	0.055 - 0.069		0.062	4	8	W2	MIDALE	4	0.051 - 0.082		0.064
			ALIDA	1	0.057		0.057				FROBISHER	3	0.061 - 0.085		0.072
			BIRDBEAR	3	0.047 - 0.058		0.051	5	8	W2	FROBISHER	2	0.055 - 0.073		0.064
9	6	W2	FROBISHER-ALIDA	6	0.046 - 0.060		0.055	6	8	W2	MANNVILLE	1	0.320		0.320
			ALIDA	1	0.081		0.081				MIDALE	7	0.100 - 0.180		0.126
			BIRDBEAR	1	0.060		0.060				FROBISHER	2	0.081 - 0.094		0.088
10	6	W2	TILSTON	1	0.172		0.172				FROBISHER-ALIDA	1	0.065		0.065
11	6	W2	TILSTON	1	0.173		0.173	7	8	W2	FROBISHER	4	0.057 - 0.069		0.064
12	6	W2	TILSTON	4	0.110 - 0.194		0.141				FROBISHER-ALIDA	2	0.059 - 0.063		0.061
16	6	W2	MANNVILLE	2	0.197 - 0.300		0.249				BIRDBEAR	2	0.046 - 0.050		0.048
19	6	W2	JURASSIC	1	0.180		0.180	8	8	W2	FROBISHER	4	0.058 - 0.065		0.061
22	6	W2	MANNVILLE	1	0.121		0.121				FROBISHER-ALIDA	5	0.055 - 0.063		0.060
23	6	W2	MANNVILLE	1	0.117		0.117				ALIDA	1	0.072		0.072
28	6	W2	DUPEROW	1	0.150		0.150				DUPEROW	1	0.049		0.049
1	7	W2	POPLAR	1	0.050		0.050				INTERLAKE	1	0.060		0.060
			MIDALE	1	0.050		0.050	9	8	W2	FROBISHER-ALIDA	3	0.112 - 0.120		0.117
3	7	W2	VIKING	1	0.272		0.272				ALIDA	1	0.145		0.145
			POPLAR	1	0.057		0.057	10	8	W2	FROBISHER-ALIDA	8	0.103 - 0.151		0.116
			MIDALE	1	0.050		0.050				ALIDA	8	0.081 - 0.165		0.116
			FROBISHER-ALIDA	1	0.056		0.056	12	8	W2	TILSTON	1	0.215		0.215
			BIRDBEAR	1	0.046		0.046				BIRDBEAR	1	0.140		0.140
4	7	W2	MIDALE	13	0.043 - 0.068		0.054				DUPEROW	1	0.157		0.157
			FROBISHER	6	0.049 - 0.057		0.051				RED RIVER	1	0.043		0.043
5	7	W2	FROBISHER	2	0.061		0.061	14	8	W2	SOURIS VALLEY	1	0.230		0.230
6	7	W2	FROBISHER	9	0.055 - 0.075		0.065				BIRDBEAR	1	0.120		0.120
7	7	W2	FROBISHER	2	0.054 - 0.056		0.055				DUPEROW	1	0.070		0.070
			FROBISHER-ALIDA	1	0.059		0.059	16	8	W2	SOURIS VALLEY	1	0.350		0.350
								2	9	W2	MIDALE-FROBISHER	1	0.050		0.050
											FROBISHER	1	0.049		0.049
								4	9	W2	MIDALE	3	0.041 - 0.055		0.046

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES	AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES
TWP	RGE	MER					TWP	RGE	MER				
4	9	W2	FROBISHER-ALIDA	1	0.055	0.055	34	10	W2	WINNIPEG	1	0.066	0.066
5	9	W2	FROBISHER	1	0.070	0.070	2	11	W2	MIDALE	1	0.060	0.060
6	9	W2	MANNVILLE	1	0.356	0.356	3	11	W2	MIDALE	3	0.050 - 0.054	0.051
			MIDALE	24	0.063 - 0.185	0.109				MIDALE-FROBISHER	1	0.068	0.068
			FROBISHER	4	0.058 - 0.064	0.061				FROBISHER	1	0.065	0.065
			FROBISHER-ALIDA	2	0.062 - 0.070	0.066	4	11	W2	MIDALE	1	0.080	0.080
7	9	W2	MANNVILLE	1	0.347	0.347				FROBISHER	1	0.050	0.050
			MIDALE	2	0.064 - 0.069	0.067				INTERLAKE	1	0.042	0.042
			FROBISHER-ALIDA	1	0.055	0.055				ORDOVICIAN	1	0.043	0.043
9	9	W2	SOURIS VALLEY	1	0.195	0.195	5	11	W2	MIDALE	3	0.058 - 0.074	0.069
										FROBISHER	1	0.064	0.064
10	9	W2	FROBISHER-ALIDA	2	0.172 - 0.200	0.186	6	11	W2	MANNVILLE	2	0.370 - 0.427	0.399
			DUPEROW	1	0.059	0.059				MIDALE	78	0.051 - 0.094	0.070
			WINNIPEGOSIS	1	0.050	0.050				FROBISHER	18	0.030 - 0.078	0.057
			INTERLAKE	1	0.051	0.051	7	11	W2	FROBISHER	13	0.065 - 0.161	0.100
			RED RIVER	1	0.048	0.048				BAKKEN	3	0.044 - 0.057	0.050
20	9	W2	VIKING	1	0.088	0.088	8	11	W2	FROBISHER	12	0.088 - 0.300	0.187
			JURASSIC	1	0.077	0.077				FROBISHER-ALIDA	2	0.148 - 0.150	0.149
21	9	W2	JURASSIC	1	0.096	0.096	9	11	W2	BIRDBEAR	1	0.112	0.112
22	9	W2	JURASSIC	1	0.118	0.118	10	11	W2	ALIDA	3	0.227 - 0.257	0.240
26	9	W2	VIKING	1	0.670	0.670	13	11	W2	BAKKEN	1	0.250	0.250
			SOURIS VALLEY	1	0.110	0.110	23	11	W2	JURASSIC	1	0.080	0.080
			BIRDBEAR	1	0.093	0.093	3	12	W2	MIDALE	2	0.058 - 0.069	0.064
33	9	W2	DUPEROW	2	0.080 - 0.081	0.081				FROBISHER	1	0.059	0.059
46	9	W2	DAWSON BAY	1	1.600	1.600	4	12	W2	VIKING	1	0.820	0.820
			DEADWOOD	1	0.080	0.080				FROBISHER	1	0.062	0.062
2	10	W2	MIDALE-FROBISHER	1	0.050	0.050	5	12	W2	MIDALE	11	0.056 - 0.078	0.068
			FROBISHER	1	0.049	0.049				FROBISHER	2	0.063 - 0.073	0.068
4	10	W2	FROBISHER	1	0.065	0.065				FROBISHER-ALIDA	1	0.062	0.062
5	10	W2	MANNVILLE	1	0.410	0.410	6	12	W2	MIDALE	28	0.060 - 0.100	0.074
			FROBISHER	1	0.070	0.070				FROBISHER	1	0.054	0.054
6	10	W2	MANNVILLE	3	0.417 - 0.490	0.441	7	12	W2	MIDALE	4	0.061 - 0.086	0.076
			MIDALE	92	0.058 - 0.093	0.074				FROBISHER	8	0.172 - 0.335	0.223
			FROBISHER	10	0.056 - 0.087	0.072	8	12	W2	FROBISHER	4	0.208 - 0.244	0.224
			FROBISHER-ALIDA	1	0.064	0.064	9	12	W2	FROBISHER	1	0.230	0.230
			BIRDBEAR	1	0.051	0.051	10	12	W2	FROBISHER	2	0.210 - 0.365	0.288
			DUPEROW	1	0.049	0.049				ALIDA	1	0.233	0.233
			WINNIPEGOSIS	1	0.048	0.048	11	12	W2	MANNVILLE	1	0.770	0.770
7	10	W2	MIDALE	8	0.064 - 0.118	0.097				ALIDA	1	0.340	0.340
			FROBISHER	17	0.057 - 0.079	0.067	13	12	W2	TILSTON	2	0.270 - 0.312	0.291
			FROBISHER-ALIDA	1	0.058	0.058	14	12	W2	BIRDBEAR	1	0.205	0.205
8	10	W2	FROBISHER	4	0.070 - 0.181	0.122	20	12	W2	JURASSIC	1	0.082	0.082
			BIRDBEAR	1	0.056	0.056	21	12	W2	MANNVILLE	1	0.084	0.084
9	10	W2	FROBISHER	1	0.412	0.412	24	12	W2	BIRDBEAR	1	0.130	0.130
10	10	W2	FROBISHER-ALIDA	1	0.157	0.157	30	12	W2	DAWSON BAY	1	0.049	0.049
			ALIDA	1	0.174	0.174	32	12	W2	DAWSON BAY	1	0.082	0.082
11	10	W2	ALIDA	1	0.214	0.214				WINNIPEGOSIS	1	0.055	0.055
14	10	W2	TILSTON	1	0.190	0.190				INTERLAKE	1	0.063	0.063
20	10	W2	JURASSIC	1	0.104	0.104	1	13	W2	RATCLIFFE	1	0.067	0.067
24	10	W2	MANNVILLE	2	0.100 - 0.120	0.110							
			BIRDBEAR	1	0.084	0.084							
			SOURIS RIVER	1	0.049	0.049							
34	10	W2	MANNVILLE	1	0.182	0.182							
			DUPEROW	2	0.158 - 0.168	0.163							

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES	AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES
TWP	RGE	MER					TWP	RGE	MER				
2	13	W2	ALIDA	1	0.064	0.064	1	15	W2	VIKING	1	0.890	0.890
			DUPEROW	1	0.043	0.043				MANNVILLE	1	0.840	0.840
										POPLAR-RATCLIFFE	1	0.056	0.056
3	13	W2	MIDALE	5	0.054 - 0.068	0.059				RATCLIFFE	12	0.047 - 0.071	0.058
			FROBISHER	2	0.060 - 0.066	0.063				MIDALE	2	0.057 - 0.075	0.066
			RED RIVER	1	0.044	0.044				TILSTON	1	0.098	0.098
5	13	W2	MIDALE	9	0.062 - 0.078	0.067	2	15	W2	RATCLIFFE	1	0.067	0.067
			MIDALE-FROBISHER	1	0.142	0.142				MIDALE	1	0.060	0.060
6	13	W2	MANNVILLE	7	0.360 - 0.514	0.422	3	15	W2	MIDALE	1	0.062	0.062
			MIDALE	32	0.057 - 0.159	0.095				FROBISHER-ALIDA	1	0.091	0.091
			MIDALE-FROBISHER	7	0.070 - 0.144	0.107	5	15	W2	MIDALE	3	0.265 - 0.270	0.267
			FROBISHER	7	0.063 - 0.251	0.140				FROBISHER	1	0.277	0.277
			FROBISHER-ALIDA	2	0.066 - 0.250	0.158	6	15	W2	VIKING	1	1.100	1.100
7	13	W2	VIKING	1	0.850	0.850				MIDALE	1	0.248	0.248
			MANNVILLE	1	0.880	0.880	7	15	W2	MIDALE	4	0.212 - 0.290	0.256
			GRAVELBOURG	1	0.280	0.280				FROBISHER-ALIDA	1	0.380	0.380
			MIDALE	13	0.095 - 0.180	0.131				BIRDBEAR	1	0.087	0.087
			FROBISHER	2	0.200 - 0.210	0.205				WINNIPEGOSIS	1	0.048	0.048
			FROBISHER-ALIDA	3	0.230 - 0.390	0.290	22	15	W2	RED RIVER	1	0.077	0.077
9	13	W2	FROBISHER-ALIDA	1	0.218	0.218	25	15	W2	BIRDBEAR	1	0.086	0.086
			BIRDBEAR	1	0.116	0.116	1	16	W2	VIKING	2	0.850 - 0.980	0.915
10	13	W2	FROBISHER-ALIDA	1	0.205	0.205				MANNVILLE	2	0.700 - 0.740	0.720
13	13	W2	TILSTON	1	0.230	0.230				RATCLIFFE	6	0.046 - 0.072	0.056
28	13	W2	BIRDBEAR	1	0.220	0.220				FROBISHER-ALIDA	1	0.049	0.049
45	13	W2	DEADWOOD	1	0.066	0.066	2	16	W2	RATCLIFFE	1	0.066	0.066
52	13	W2	WINNIPEG	1	2.560	2.560	3	16	W2	RATCLIFFE	1	0.048	0.048
2	14	W2	VIKING	1	0.740	0.740				MIDALE-FROBISHER	1	0.053	0.053
			MANNVILLE	1	0.850	0.850	4	16	W2	POPLAR	1	0.600	0.600
			RATCLIFFE	1	0.062 - 0.067	0.064				MIDALE	1	0.110	0.110
			RATCLIFFE-MIDALE	1	0.068	0.068	6	16	W2	MIDALE	2	0.266 - 0.290	0.278
3	14	W2	VIKING	1	1.120	1.120				BIRDBEAR	1	0.049	0.049
			RATCLIFFE-MIDALE	1	0.089	0.089	7	16	W2	VIKING	1	0.780	0.780
			FROBISHER-ALIDA	1	0.058	0.058				MIDALE	1	0.300	0.300
4	14	W2	BAKKEN	1	0.050	0.050				FROBISHER	1	0.340	0.340
			WINNIPEGOSIS	1	0.053	0.053	8	16	W2	MIDALE	4	0.135 - 0.305	0.244
5	14	W2	MIDALE	8	0.060 - 0.073	0.066				DUPEROW	1	0.053	0.053
			FROBISHER	3	0.060 - 0.092	0.071	9	16	W2	FROBISHER	1	0.230	0.230
6	14	W2	MIDALE	39	0.064 - 0.272	0.143				FROBISHER-ALIDA	1	0.240	0.240
			MIDALE-FROBISHER	3	0.157 - 0.220	0.183				BIRDBEAR	1	0.064	0.064
			FROBISHER	3	0.220 - 0.286	0.249	14	16	W2	RED RIVER	1	0.056	0.056
			FROBISHER-ALIDA	2	0.273 - 0.300	0.287	19	16	W2	BIRDBEAR	1	0.110	0.110
7	14	W2	MIDALE	5	0.145 - 0.210	0.168	21	16	W2	DUPEROW	1	0.060	0.060
			WINNIPEGOSIS	1	0.047	0.047				SOURIS RIVER	1	0.055	0.055
9	14	W2	VIKING	1	0.810	0.810				WINNIPEGOSIS	1	0.069	0.069
10	14	W2	BIRDBEAR	1	0.105	0.105				INTERLAKE	1	0.074	0.074
			INTERLAKE	1	0.045	0.045				RED RIVER	1	0.074	0.074
			WINNIPEG	1	0.042	0.042				WINNIPEG	1	0.079	0.079
11	14	W2	VIKING	1	0.830	0.830	23	16	W2	RED RIVER	1	0.067	0.067
			JURASSIC	1	0.600	0.600				WINNIPEG	1	0.078	0.078
			FROBISHER-ALIDA	1	0.260	0.260	25	16	W2	BIRDBEAR	1	0.110	0.110
			ALIDA	1	0.284	0.284	31	16	W2	THREE FORKS	1	0.127	0.127
			BAKKEN	1	0.180	0.180	1	17	W2	VIKING	1	0.680	0.680
15	14	W2	BIRDBEAR	1	0.243	0.243				MANNVILLE	1	0.845	0.845
52	14	W2	WINNIPEG	1	1.340	1.340				POPLAR	1	0.046	0.046
			DEADWOOD	1	1.500	1.500				RATCLIFFE	3	0.035 - 0.065	0.053

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES	AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES
TWP	RGE	MER					TWP	RGE	MER				
1	17	W2	RED RIVER	1	0.051	0.051	3	19	W2	BIRDBEAR	1	0.047	0.047
2	17	W2	MANNVILLE	1	1.000	1.000	4	19	W2	BIRDBEAR	1	0.227	0.227
			RATCLIFFE	1	0.052	0.052				RED RIVER	1	0.048	0.048
			MIDALE	1	0.093	0.093	5	19	W2	RATCLIFFE	1	0.155	0.155
			BIRDBEAR	1	0.072	0.072				RATCLIFFE-MIDALE	2	0.310 - 0.320	0.315
3	17	W2	RATCLIFFE	1	0.085	0.085	6	19	W2	RATCLIFFE-MIDALE	1	0.390	0.390
4	17	W2	RATCLIFFE	2	0.063 - 0.086	0.075				MIDALE	6	0.265 - 0.383	0.330
			BIRDBEAR	1	0.051	0.051				BAKKEN	1	0.067	0.067
			WINNIPEG	1	0.044	0.044				BIRDBEAR	1	0.072	0.072
5	17	W2	VIKING	1	0.790	0.790	8	19	W2	BIRDBEAR	1	0.059	0.059
			LOWER SHAUNAVON	2	0.360	0.360	10	19	W2	VIKING	1	1.050	1.050
			MIDALE	2	0.410	0.410				GRAVELBOURG	1	0.690	0.690
			FROBISHER-ALIDA	2	0.180 - 0.380	0.280				RATCLIFFE	1	0.420	0.420
			BIRDBEAR	1	0.080	0.080	13	19	W2	WATROUS	1	0.340	0.340
13	17	W2	RIERDON	1	0.330	0.330				FROBISHER-ALIDA	1	0.380	0.380
			MADISON (UNDIFF)	1	0.305	0.305				BIRDBEAR	1	0.120	0.120
27	17	W2	DAWSON BAY	1	0.046	0.046	42	19	W2	SOURIS RIVER	1	0.100	0.100
			WINNIPEGOSIS	1	0.048	0.048	47	19	W2	WINNIPEGOSIS	1	1.180	1.180
35	17	W2	INTERLAKE	1	0.043	0.043	1	20	W2	POPLAR	1	0.068	0.068
48	17	W2	DAWSON BAY	1	0.790	0.790				RATCLIFFE	1	0.090	0.090
			WINNIPEGOSIS	1	1.470	1.470				BIRDBEAR	2	0.070 - 0.080	0.075
			INTERLAKE	1	2.170	2.170				INTERLAKE	1	0.055	0.055
			DEADWOOD	1	2.430	2.430				WINNIPEG	1	0.053	0.053
1	18	W2	BIRDBEAR	1	0.057	0.057	2	20	W2	RATCLIFFE	1	0.210	0.210
2	18	W2	RED RIVER	1	0.050	0.050				FROBISHER-ALIDA	1	0.140	0.140
4	18	W2	RATCLIFFE	1	0.116	0.116	3	20	W2	MADISON (UNDIFF)	1	0.973	0.973
5	18	W2	MIDALE	1	0.398	0.398	4	20	W2	MADISON (UNDIFF)	1	0.672	0.672
			BIRDBEAR	1	0.110	0.110				FROBISHER-ALIDA	1	0.520	0.520
6	18	W2	RIERDON	1	0.104	0.104				DUPEROW	1	0.080	0.080
			MIDALE	1	0.330	0.330				WINNIPEGOSIS	1	0.048	0.048
			BIRDBEAR	1	0.115	0.115				INTERLAKE	1	0.050	0.050
			RED RIVER	1	0.047	0.047	5	20	W2	VIKING	1	0.975	0.975
7	18	W2	MIDALE	1	0.460	0.460				MANNVILLE	1	1.330	1.330
			TILSTON	1	0.222	0.222				MIDALE	1	0.810	0.810
			BIRDBEAR	1	0.106	0.106				FROBISHER-ALIDA	1	0.640	0.640
			DUPEROW	1	0.061	0.061	6	20	W2	BIRDBEAR	1	0.620	0.620
12	18	W2	VIKING	1	1.200	1.200	8	20	W2	BIRDBEAR	1	0.082	0.082
			GRAVELBOURG	1	0.900	0.900				INTERLAKE	1	0.051	0.051
			FROBISHER-ALIDA	1	0.500	0.500				RED RIVER	1	0.054	0.054
16	18	W2	MANNVILLE	1	0.453	0.453	9	20	W2	BIRDBEAR	1	0.135	0.135
28	18	W2	DAWSON BAY	1	0.056	0.056	12	20	W2	MANNVILLE	1	0.240	0.240
									BIRDBEAR	1	0.178	0.178	
46	18	W2	STONY MOUNTAIN	1	0.141	0.141	13	20	W2	FROBISHER-ALIDA	1	0.255	0.255
			WINNIPEG	1	0.104	0.104				BIRDBEAR	1	0.187	0.187
50	18	W2	DAWSON BAY	2	3.200	3.200				RED RIVER	1	0.058	0.058
			WINNIPEG	1	3.300	3.300	23	20	W2	INTERLAKE	1	0.066	0.066
1	19	W2	BIRDBEAR	1	0.049	0.049				WINNIPEG	1	0.086	0.086
2	19	W2	MANNVILLE	1	1.130	1.130	40	20	W2	WINNIPEGOSIS	1	0.093	0.093
			POPLAR	3	0.050 - 0.086	0.071	41	20	W2	WINNIPEGOSIS	1	0.300	0.300
			RATCLIFFE	3	0.069 - 0.100	0.082							
			BIRDBEAR	4	0.037 - 0.068	0.051	2	21	W2	MIDALE	1	0.210	0.210
			INTERLAKE	1	0.061	0.061							
			STONY MOUNTAIN	1	0.130	0.130	3	21	W2	POPLAR	1	0.484	0.484
			RED RIVER	2	0.052 - 0.060	0.056							
			WINNIPEG	1	0.060	0.060	4	21	W2	POPLAR	1	0.950	0.950
3	19	W2	RATCLIFFE	2	0.082 - 0.091	0.087				RATCLIFFE	1	0.650	0.650

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES		AVERAGE RESISTIVITY	AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES		AVERAGE RESISTIVITY
TWP	RGE	MER			OHM-METRES			TWP	RGE	MER			OHM-METRES		
4	21	W2	MIDALE	1	0.800		0.800	28	22	W2	WINNIPEG	2	0.059 - 0.072		0.066
			BIRDBEAR	1	0.800		0.800	40	22	W2	MANNVILLE	1	0.251		0.251
			YEOMAN	2	0.047 - 0.055		0.051	42	22	W2	ASHERN	1	0.071		0.071
6	21	W2	RATCLIFFE	1	0.674		0.674	47	22	W2	WINNIPEGOSIS	1	0.850		0.850
			MADISON (UNDIFF)	1	0.600		0.600	1	23	W2	BIRDBEAR	1	0.160		0.160
			BIRDBEAR	1	0.274		0.274				DUPEROW	1	0.073		0.073
7	21	W2	RATCLIFFE	1	1.040		1.040				INTERLAKE	1	0.071		0.071
			MIDALE	1	0.750		0.750				YEOMAN	1	0.061		0.061
			BIRDBEAR	1	0.560		0.560	2	23	W2	MADISON (UNDIFF)	1	0.900		0.900
			DUPEROW	1	0.120		0.120				POPLAR	1	1.700		1.700
			INTERLAKE	1	0.048		0.048				BIRDBEAR	1	0.190		0.190
			RED RIVER	1	0.050		0.050	3	23	W2	MANNVILLE	1	1.750		1.750
			WINNIPEG	1	0.048		0.048				MADISON (UNDIFF)	1	0.460		0.460
8	21	W2	VIKING	1	0.960		0.960				POPLAR	1	1.140		1.140
			MANNVILLE	1	1.010		1.010				RATCLIFFE	1	0.680		0.680
			LOWER SHAUNAVON	1	0.690		0.690	5	23	W2	RATCLIFFE	1	0.139		0.139
			MADISON (UNDIFF)	1	0.950		0.950				BIRDBEAR	1	0.198		0.198
			BIRDBEAR	1	0.530		0.530				RED RIVER	1	0.064		0.064
			DUPEROW	1	0.310		0.310				YEOMAN	1	0.048		0.048
			WINNIPEGOSIS	1	0.052		0.052				WINNIPEG	1	0.048		0.048
			INTERLAKE	1	0.048		0.048	6	23	W2	BIRDBEAR	1	0.445		0.445
			STONEWALL	1	0.074		0.074	9	23	W2	GRAVELBOURG	1	1.040		1.040
			RED RIVER	2	0.046 - 0.047		0.047	12	23	W2	DUPEROW	1	0.340		0.340
10	21	W2	GRAVELBOURG	1	0.730		0.730	14	23	W2	BIRDBEAR	1	0.153		0.153
			BIRDBEAR	1	0.440		0.440				DUPEROW	3	0.144 - 0.158		0.149
11	21	W2	MANNVILLE	1	0.480		0.480				PRAIRIE	1	0.156		0.156
			INTERLAKE	1	0.060		0.060				EVAPORITE	1	0.137		0.137
12	21	W2	MADISON (UNDIFF)	1	0.225		0.225				ASHERN	1	0.131		0.131
			BIRDBEAR	1	0.060		0.060				INTERLAKE	1	0.151		0.151
			INTERLAKE	2	0.048 - 0.059		0.054				WINNIPEG	1	0.074		0.074
			WINNIPEG	1	0.053		0.053	18	23	W2	BIRDBEAR	1	0.260		0.260
14	21	W2	BIRDBEAR	1	0.124		0.124				DUPEROW	2	0.245 - 0.274		0.260
			RED RIVER	1	0.050		0.050				SOURIS RIVER	1	0.250		0.250
			WINNIPEG	1	0.053		0.053				DAWSON BAY	2	0.038 - 0.039		0.039
			DEADWOOD	1	0.049		0.049				MIDDLE INTERLAKE	1	0.062		0.062
26	21	W2	DUPEROW	1	0.079		0.079				LOWER INTERLAKE	1	0.049		0.049
29	21	W2	SOURIS RIVER	1	0.056		0.056	36	23	W2	WINNIPEGOSIS	1	0.058		0.058
			INTERLAKE	1	0.063		0.063	50	23	W2	WINNIPEGOSIS	1	1.350		1.350
			WINNIPEG	1	0.062		0.062				WINNIPEG	1	0.420		0.420
43	21	W2	STONEWALL-STONY MOUNTAIN	1	0.203		0.203	3	24	W2	MADISON (UNDIFF)	1	0.180		0.180
3	22	W2	VIKING	1	1.080		1.080				DUPEROW	1	0.072		0.072
			MADISON (UNDIFF)	2	0.550 - 0.590		0.570				WINNIPEGOSIS	1	0.064		0.064
			POPLAR	1	1.620		1.620				INTERLAKE	1	0.052		0.052
			RATCLIFFE	2	0.485 - 0.900		0.693				STONEWALL	1	0.055		0.055
			BIRDBEAR	1	0.160		0.160				RED RIVER	2	0.050 - 0.052		0.051
4	22	W2	RATCLIFFE	1	0.720		0.720				WINNIPEG	1	0.050		0.050
			BIRDBEAR	1	0.190		0.190	6	24	W2	MADISON (UNDIFF)	1	1.600		1.600
6	22	W2	BIRDBEAR	1	0.156		0.156	7	24	W2	RATCLIFFE	1	0.930		0.930
			DUPEROW	1	0.150		0.150	10	24	W2	DUPEROW	1	0.360		0.360
8	22	W2	RED RIVER	1	0.050		0.050	12	24	W2	LOWER SHAUNAVON- GRAVELBOURG	1	1.860		1.860
9	22	W2	JURASSIC	1	0.730		0.730				MADISON (UNDIFF)	1	2.050		2.050
			MADISON (UNDIFF)	1	1.120		1.120				BIRDBEAR	1	1.170		1.170
			DUPEROW	1	0.175		0.175				DUPEROW	1	0.780		0.780
			WINNIPEGOSIS	1	0.058		0.058	14	24	W2	MANNVILLE	1	0.760		0.760
			INTERLAKE	1	0.066		0.066				DUPEROW	1	0.170		0.170
17	22	W2	MANNVILLE	1	0.295		0.295								
			MADISON (UNDIFF)	1	0.247		0.247								
			DEVONIAN	6	0.080 - 0.128		0.118								
			BIRDBEAR	1	0.115		0.115								
			INTERLAKE	1	0.083		0.083								

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES		AVERAGE RESISTIVITY OHM-METRES	AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES		AVERAGE RESISTIVITY OHM-METRES
TWP	RGE	MER			OHM-METRES			TWP	RGE	MER			OHM-METRES		
14	24	W2	DAWSON BAY	1	0.150		0.150	12	26	W2	WINNIPEG	1	0.053		0.053
			WINNIPEGOSIS	1	0.150		0.150								
			INTERLAKE	4	0.085 - 0.131		0.109	15	26	W2	STONEWALL	1	0.054		0.054
16	24	W2	MADISON (UNDIFF)	1	0.920		0.920	1	27	W2	MIDALE	1	1.350		1.350
											BIRDBEAR	1	0.650		0.650
18	24	W2	BIRDBEAR	1	0.044		0.044				DAWSON BAY	1	0.112		0.112
			WINNIPEGOSIS	1	0.043		0.043				INTERLAKE	2	0.089 - 0.100		0.095
											RED RIVER	1	0.121		0.121
61	24	W2	WINNIPEG	1	6.290		6.290				WINNIPEG	1	0.083		0.083
1	25	W2	POPLAR	1	0.083		0.083	5	27	W2	RATCLIFFE	1	2.300		2.300
			BIRDBEAR	1	0.170		0.170				BAKKEN	1	0.400		0.400
3	25	W2	MADISON (UNDIFF)	2	0.290 - 0.380		0.335	7	27	W2	WINNIPEGOSIS	1	0.256		0.256
			BAKKEN	1	0.051		0.051				RED RIVER	1	0.252		0.252
			BIRDBEAR	1	0.472		0.472								
			DUPEROW	2	0.107 - 0.115		0.111	12	27	W2	BIRDBEAR-DUPEROW	1	3.000		3.000
			INTERLAKE	1	0.062		0.062				STONEWALL	1	0.475		0.475
											WINNIPEG	1	0.058		0.058
5	25	W2	GRAVELBOURG	1	0.640		0.640	19	27	W2	DAWSON BAY	1	0.048		0.048
			MADISON (UNDIFF)	1	0.860		0.860				WINNIPEG	1	0.046		0.046
			BAKKEN	3	0.053 - 0.070		0.062								
			BIRDBEAR	1	0.200		0.200	20	27	W2	WINNIPEG	1	0.060		0.060
6	25	W2	RATCLIFFE	1	1.040		1.040	39	27	W2	WINNIPEGOSIS	1	0.067		0.067
10	25	W2	MADISON (UNDIFF)	4	1.820 - 2.330		2.038	56	27	W2	WINNIPEG	1	1.095		1.095
			BIRDBEAR	1	1.500		1.500								
			DUPEROW	1	1.330		1.330	1	28	W2	POPLAR	1	2.310		2.310
15	25	W2	DUPEROW	1	0.315		0.315				RATCLIFFE	1	2.010		2.010
											SOURIS VALLEY	1	1.510		1.510
20	25	W2	BIRDBEAR	1	0.650		0.650				BIRDBEAR	1	0.740		0.740
			DUPEROW	1	0.033		0.033	3	28	W2	MIDALE	1	1.420		1.420
24	25	W2	UPPER SHAUNAVON	1	0.083		0.083				BIRDBEAR	1	0.660		0.660
			BIRDBEAR	1	0.078		0.078				DUPEROW	2	0.470 - 2.350		1.410
			DUPEROW	1	0.136		0.136				INTERLAKE	1	0.130		0.130
											YEOMAN	1	0.145		0.145
27	25	W2	MANNVILLE	1	0.142		0.142	4	28	W2	RATCLIFFE	1	3.000		3.000
			WINNIPEGOSIS	1	0.048		0.048				BIRDBEAR	1	3.530		3.530
			INTERLAKE	2	0.065		0.065	5	28	W2	MADISON (UNDIFF)	2	2.550 - 2.950		2.750
			WINNIPEG	1	0.064		0.064				DUPEROW	2	1.800 - 2.950		2.375
33	25	W2	JURASSIC	1	0.056		0.056	8	28	W2	COLORADO	1	1.410		1.410
36	25	W2	INTERLAKE	1	0.058		0.058				GRAVELBOURG	1	1.080		1.080
54	25	W2	WINNIPEGOSIS	1	1.300		1.300				MADISON (UNDIFF)	1	2.080		2.080
55	25	W2	WINNIPEGOSIS	5	2.171 - 2.447		2.303	14	28	W2	MADISON (UNDIFF)	1	2.150		2.150
			INTERLAKE	1	1.020		1.020	26	28	W2	BIRDBEAR	1	0.300		0.300
			WINNIPEG	1	0.845		0.845				DUPEROW	1	0.158		0.158
4	26	W2	RATCLIFFE	2	1.960 - 2.320		2.140	27	28	W2	MANNVILLE	1	0.177		0.177
			BAKKEN	1	0.870		0.870				WINNIPEGOSIS	1	0.053		0.053
7	26	W2	MADISON (UNDIFF)	2	1.980 - 2.420		2.200				INTERLAKE	1	0.052		0.052
			BIRDBEAR	1	0.680		0.680				YEOMAN-WINNIPEG	1	0.050		0.050
8	26	W2	MADISON (UNDIFF)	1	2.400		2.400	32	28	W2	MANNVILLE	2	0.250 - 0.305		0.278
			BIRDBEAR	1	2.500		2.500	38	28	W2	MANNVILLE	1	0.132		0.132
10	26	W2	MADISON (UNDIFF)	1	2.370		2.370				WINNIPEGOSIS	1	0.051		0.051
			SOURIS VALLEY	1	1.990		1.990	2	29	W2	MADISON (UNDIFF)	2	2.590 - 2.730		2.660
			BIRDBEAR	1	1.970		1.970				DUPEROW	2	1.600 - 2.880		2.240
			DUPEROW	1	6.030		6.030				SOURIS RIVER	2	1.320 - 1.350		1.335
			WINNIPEGOSIS	1	0.410		0.410				ASHERN	1	0.640		0.640
			INTERLAKE	1	0.180		0.180				INTERLAKE	2	0.740 - 2.900		1.820
			RED RIVER	1	0.079		0.079	7	29	W2	MANNVILLE	1	2.150		2.150
			WINNIPEG	1	0.065		0.065				RATCLIFFE	1	2.050		2.050
			DEADWOOD	1	0.066		0.066	11	29	W2	BELLY RIVER	1	1.330		1.330
12	26	W2	BIRDBEAR	1	1.150		1.150				MANNVILLE	2	0.880 - 1.610		1.245
			SOURIS RIVER	1	0.262		0.262								
			RED RIVER	1	0.073		0.073								

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES	AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES
TWP	RGE	MER					TWP	RGE	MER				
11	29	W2	MADISON (UNDIFF)	1	2.760	2.760	2	3	W3	INTERLAKE	1	2.210	2.210
12	29	W2	MANNVILLE	1	0.910	0.910				INTERLAKE	1	1.800	1.800
			VANGUARD	1	0.580	0.580				STONEWALL			
17	29	W2	INTERLAKE	1	0.160	0.160				STONY MOUNTAIN	1	2.000	2.000
32	29	W2	MANNVILLE	1	0.215	0.215				STONY MOUNTAIN	1	2.090	2.090
			THREE FORKS	1	0.123	0.123				WINNIPEG	1	2.290	2.290
5	30	W2	INTERLAKE	1	1.200	1.200	3	3	W3	MADISON (UNDIFF)	2	2.450 - 2.600	2.525
2	1	W3	ROSERAY	1	2.140	2.140				DAWSON BAY	1	2.040	2.040
			MADISON (UNDIFF)	1	3.740	3.740	4	3	W3	MANNVILLE	1	2.490	2.490
9	1	W3	MANNVILLE	1	2.120	2.120				DUPEROW	1	3.240	3.240
			ROSERAY	1	1.430	1.430	8	3	W3	UPPER VANGUARD	1	2.310	2.310
			MADISON (UNDIFF)	1	2.130	2.130				MADISON (UNDIFF)	1	3.020	3.020
			BIRDBEAR	1	1.380	1.380				BIRDBEAR	1	2.710	2.710
11	1	W3	MANNVILLE	1	1.280	1.280	13	3	W3	MANNVILLE	1	1.500	1.500
			ROSERAY	1	1.180	1.180				ROSERAY	1	1.300	1.300
17	1	W3	ROSERAY	1	0.500	0.500				MADISON (UNDIFF)	1	1.140	1.140
19	1	W3	WINNIPEGOSIS	1	0.280	0.280	15	3	W3	MADISON (UNDIFF)	1	3.170	3.170
			DEADWOOD	1	0.069	0.069	17	3	W3	MADISON (UNDIFF)	1	1.940	1.940
20	1	W3	ROSERAY	1	0.525	0.525	20	3	W3	BIRDBEAR	1	1.130	1.130
23	1	W3	WINNIPEGOSIS	1	0.070	0.070	21	3	W3	MANNVILLE	1	1.000	1.000
			WINNIPEG	1	0.086	0.086				ROSERAY	1	1.150	1.150
25	1	W3	DUPEROW	1	0.340	0.340	34	3	W3	PRAIRIE			
33	1	W3	ASHERN	1	0.056	0.056				EVAPORITE-	1	0.077	0.077
			DEADWOOD	1	0.062	0.062				WINNIPEGOSIS	1	0.063	0.063
34	1	W3	INTERLAKE	1	0.079	0.079	6	4	W3	INTERLAKE	1		
37	1	W3	WINNIPEGOSIS	1	0.053	0.053				BIRDBEAR	1	1.560	1.560
			INTERLAKE	1	0.049	0.049				DUPEROW	1	1.650	1.650
			WINNIPEG	1	0.047	0.047				SOURIS RIVER	1	0.300	0.300
38	1	W3	WINNIPEGOSIS-							INTERLAKE	1	2.750	2.750
			ASHERN-WINNIPEG	1	0.065	0.065				WINNIPEG	1	2.140	2.140
			INTERLAKE	1	0.055	0.055	8	4	W3	SOURIS RIVER	2	0.860 - 1.350	1.105
46	1	W3	STONEWALL-STONY				9	4	W3	MADISON (UNDIFF)	1	2.200	2.200
			MOUNTAIN	1	0.220	0.220				BIRDBEAR	2	2.220 - 2.350	2.285
5	2	W3	ROSERAY	1	2.390	2.390				DUPEROW	2	1.050 - 1.720	1.385
			MADISON (UNDIFF)	2	2.900 - 3.000	2.950				WINNIPEG	1	2.450	2.450
			DUPEROW	1	3.300	3.300	10	4	W3	ROSERAY	1	1.490	1.490
21	2	W3	ROSERAY	1	0.930	0.930				MADISON (UNDIFF)	1	2.200	2.200
			GRAVELBOURG	1	0.534	0.534				BIRDBEAR	1	2.700	2.700
			DAWSON BAY	1	0.340	0.340				DUPEROW	1	2.710	2.710
			INTERLAKE	1	0.073	0.073				INTERLAKE	1	2.910	2.910
51	2	W3	DAWSON BAY	1	0.930	0.930				RED RIVER	1	1.740	1.740
			WINNIPEGOSIS	1	0.730	0.730				WINNIPEG	1	3.020	3.020
			INTERLAKE	1	0.590	0.590	17	4	W3	MANNVILLE	1	1.300	1.300
			RED RIVER	1	0.300	0.300				MADISON (UNDIFF)	1	2.000	2.000
52	2	W3	DAWSON BAY	1	0.860	0.860	26	4	W3	LOWER SHAUNAVON	1	0.650	0.650
			WINNIPEGOSIS	1	1.240	1.240				GRAVELBOURG	1	0.650	0.650
			INTERLAKE	1	1.260	1.260				MADISON (UNDIFF)	1	0.390	0.390
			WINNIPEG	1	0.390	0.390				BIRDBEAR	1	0.460	0.460
64	2	W3	SOURIS RIVER	1	9.270	9.270				DUPEROW	3	0.248 - 0.390	0.299
			DEADWOOD	1	1.780	1.780				SOURIS RIVER	1	0.154	0.154
2	3	W3	RATCLIFFE-MIDALE	1	2.230	2.230				DAWSON BAY	1	0.106	0.106
			BIRDBEAR	1	2.200	2.200				WINNIPEGOSIS	1	0.083	0.083
			DUPEROW	1	3.110	3.110				INTERLAKE	1	0.101	0.101
			WINNIPEGOSIS-				39	4	W3	DAWSON BAY	1	0.053	0.053
										ASHERN	1	0.055	0.055
							47	4	W3	STONEWALL-			
										STONY MOUNTAIN	1	0.147	0.147
							26	5	W3	SOURIS VALLEY	1	0.450	0.450
										BIRDBEAR	1	0.720	0.720

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES		AVERAGE RESISTIVITY	AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES		AVERAGE RESISTIVITY
TWP	RGE	MER			OHM-METRES	OHM-METRES		TWP	RGE	MER			OHM-METRES	OHM-METRES	
26	5	W3	DUPEROW	1	0.372	0.372	0.120	10	8	W3	ROSERAY	1	1.540	1.540	2.450
			DAWSON BAY	1	0.120	0.120					BIRDBEAR	1	2.450	2.450	
29	5	W3	DUPEROW	2	0.320	0.320	0.102	11	8	W3	GRAVELBOURG	1	1.410	1.410	0.120
			WINNIPEGOSIS	1	0.102	0.102					ROSERAY	1	0.120	0.120	
			STONEWALL- STONY MOUNTAIN	1	0.085	0.085	0.224	14	8	W3	ROSERAY	1	1.620	1.620	0.930
48	5	W3	SOURIS RIVER	1	0.224	0.224		17	8	W3	MANNVILLE	1	0.579 - 1.280	0.930	
63	5	W3	SOURIS RIVER	1	10.000	10.000	7.550	19	8	W3	SOURIS RIVER	2	1.430	1.430	0.200
			DAWSON BAY	1	7.550	7.550					BASAL MANNVILLE	1	0.236	0.236	
1	6	W3	MANNVILLE	1	3.260	3.260	2.820	31	8	W3	BIRDBEAR	1	0.068	0.068	0.048
3	6	W3	MADISON (UNDIFF)	1	2.800	2.800					DUPEROW	1	0.048	0.048	
			BIRDBEAR	1	2.800	2.800	2.900				STONEWALL	1	0.150	0.150	0.071
			WINNIPEGOSIS	1	2.700	2.700					RED RIVER	1	0.071	0.071	
			INTERLAKE	1	2.900	2.900	2.285	32	8	W3	BIRDBEAR	1	0.056	0.056	0.048
9	6	W3	MANNVILLE	2	2.170 - 2.400	2.285					INTERLAKE	1	0.045 - 0.050	0.048	
10	6	W3	MADISON (UNDIFF)	1	2.520	2.520	1.520	35	8	W3	STONY MOUNTAIN	1	8.600	8.600	2.080
15	6	W3	SOURIS RIVER	1	0.410	0.410					DEADWOOD	4	2.080	2.080	
			WINNIPEGOSIS	1	0.960	0.960	0.112	63	8	W3	MANNVILLE	1	1.700	1.700	1.580
			INTERLAKE	1	0.112	0.112					DEADWOOD	1	1.580	1.580	
			RED RIVER	1	0.063 - 0.108	0.088	0.117	1	9	W3	BASAL CANTUAR	1	2.390 - 2.800	2.595	1.480
			DEADWOOD	2	0.063 - 0.108	0.088					UPPER ROSERAY	1	1.480	1.480	
16	6	W3	ROSERAY	1	0.117	0.117	0.895				ROSERAY	2	3.360	3.360	1.850
19	6	W3	BELLY RIVER	3	0.755 - 0.975	0.895		3	9	W3	MANNVILLE	1	1.850	1.850	
			MANNVILLE	1	3.800	3.800	1.400				MADISON (UNDIFF)	1	2.520 - 2.740	2.630	2.390
			ROSERAY	1	1.780	1.780		4	9	W3	MANNVILLE	1	2.390	2.390	
			LOWER SHAUNAVON	1	1.400	1.400	1.380				MADISON (UNDIFF)	1	1.600	1.600	0.937
20	6	W3	MANNVILLE	2	1.162 - 1.218	1.190		6	9	W3	MADISON (UNDIFF)	1	0.937	0.937	
23	6	W3	BIRDBEAR	1	1.380	1.380	0.235				DUPEROW	1	1.485	1.485	1.370
			DUPEROW	2	0.140 - 0.330	0.235		7	9	W3	VIKING	1	1.370	1.370	
			INTERLAKE	1	2.700	2.700	0.055				MANNVILLE	1	0.242	0.242	2.376
37	6	W3	WINNIPEGOSIS	1	0.055	0.055					ROSERAY	1	2.376	2.376	
			INTERLAKE	1	0.066	0.066	1.800				GRAVELBOURG	1	1.500	1.500	1.520
2	7	W3	MADISON (UNDIFF)	1	1.800	1.800		8	9	W3	LOWER SHAUNAVON	1	1.520	1.520	
9	7	W3	ROSERAY	1	1.900	1.900	1.260	15	9	W3	CANTUAR	1	1.600	1.600	1.700
16	7	W3	CANTUAR	1	1.580	1.580					UPPER	1	1.700	1.700	
			MADISON (UNDIFF)	1	1.240	1.240	1.580	4	10	W3	GRAVELBOURG	1	1.500	1.500	1.400
			BIRDBEAR	1	1.240	1.240					GRAVELBOURG	1	1.400	1.400	
19	7	W3	MANNVILLE	1	3.220	3.220	0.054	9	10	W3	MANNVILLE	1	1.200	1.200	2.070
30	7	W3	MANNVILLE	1	1.110	1.110					CANTUAR	1	2.070	2.070	
			INTERLAKE	1	0.054	0.054	0.075				ROSERAY	1	2.300	2.300	1.350
34	7	W3	WINNIPEGOSIS	1	0.075	0.075		14	10	W3	MANNVILLE	1	1.350	1.350	
35	7	W3	DUPEROW	2	0.133 - 0.205	0.169	3.080				DUPEROW	1	1.580	1.580	1.460
5	8	W3	ASHERN-INTERLAKE	1	3.080	3.080		15	10	W3	CANTUAR	1	1.460	1.460	
			WINNIPEG	1	2.870	2.870	1.850	19	10	W3	CANTUAR	1	1.620	1.620	0.930
			DEADWOOD	1	0.084	0.084					GRAVELBOURG	1	0.930	0.930	
6	8	W3	MANNVILLE	1	1.850	1.850	2.000	20	10	W3	BIRDBEAR	1	1.150	1.150	1.180
			CANTUAR	1	2.000	2.000					MANNVILLE	1	1.180	1.180	
			MADISON (UNDIFF)	1	2.570	2.570	1.680	22	10	W3	GRAVELBOURG	1	1.430	1.430	0.450
7	8	W3	MANNVILLE	1	1.680	1.680					BIRDBEAR	1	0.450 - 0.750	0.600	
			GRAVELBOURG	1	0.970	0.970	1.540	24	10	W3	SOURIS VALLEY	1	0.122	0.122	0.600
8	8	W3	LOWER COLORADO	1	1.680	1.680					DUPEROW	2	0.450 - 0.750	0.600	
			VIKING	1	0.720	0.720	1.540				DAWSON BAY	1	0.122	0.122	
			ROSERAY	1	1.540	1.540									

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES	AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES
TWP	RGE	MER					TWP	RGE	MER				
24	10	W3	PRAIRIE EVAPORITE- WINNIPEGOSIS	1	0.094	0.094	2	13	W3	VIKING MANNVILLE	1 1	1.750 2.850	1.750 2.850
			INTERLAKE	2	0.080 - 0.085	0.083	11	13	W3	CANTUAR	1	1.100	1.100
			STONEWALL	1	0.080	0.080	13	13	W3	ROSERAY	1	0.845	0.845
			RED RIVER	1	0.055	0.055	14	13	W3	ROSERAY	1	1.170	1.170
27	10	W3	MANNVILLE	2	1.240 - 1.280	1.260	15	13	W3	CANTUAR	1	1.020	1.020
			BAKKEN	1	0.970	0.970	17	13	W3	MANNVILLE	1	1.710	1.710
			BIRDBEAR	1	0.277	0.277				CANTUAR	1	1.350	1.350
60	10	W3	DEVONIAN	1	7.480	7.480				ROSERAY	1	1.440	1.440
			WINNIPEGOSIS	1	5.900	5.900	18	13	W3	CANTUAR	1	1.230	1.230
2	11	W3	BIRDBEAR	1	2.720	2.720	19	13	W3	VIKING	1	0.635	0.635
			SOURIS RIVER	1	3.340	3.340				MANNVILLE	2	1.450 - 1.580	1.515
7	11	W3	MADISON (UNDIFF)	1	4.100	4.100				CANTUAR	1	1.100	1.100
12	11	W3	VIKING	1	0.620	0.620	25	13	W3	VIKING	1	0.850	0.850
16	11	W3	CANTUAR	1	1.580	1.580				MANNVILLE	1	1.500	1.500
18	11	W3	CANTUAR	3	1.740 - 2.160	1.890	27	13	W3	MANNVILLE	3	0.300 - 1.850	1.177
19	11	W3	BASAL MANNVILLE	1	1.320	1.320				WINNIPEGOSIS	1	0.059	0.059
			MADISON (UNDIFF)	1	1.450	1.450	29	13	W3	BAKKEN	1	0.970	0.970
21	11	W3	DUPEROW	1	0.136	0.136	39	13	W3	MANNVILLE	1	0.111	0.111
			WINNIPEGOSIS	1	0.062	0.062	46	13	W3	VIKING	1	0.150	0.150
23	11	W3	DUPEROW	1	0.970	0.970				DUPEROW-	1	0.108	0.108
			DAWSON BAY	1	0.064	0.064				SOURIS RIVER	1	0.098	0.098
			INTERLAKE	1	0.067	0.067				SOURIS RIVER	1	0.060	0.060
27	11	W3	DUPEROW	2	0.132 - 0.140	0.136				DAWSON BAY	1	0.074	0.074
			SOURIS RIVER	1	0.110	0.110	66	13	W3	WINNIPEGOSIS	1	0.104	0.104
			INTERLAKE	1	0.089	0.089				DEADWOOD	1	0.335	0.335
29	11	W3	MANNVILLE	1	1.480	1.480	1	14	W3	MANNVILLE	1	1.100	1.100
30	11	W3	MANNVILLE	1	0.830	0.830				MADISON (UNDIFF)	1	2.780	2.780
60	11	W3	DAWSON BAY	1	4.330	4.330	4	14	W3	BASAL MANNVILLE	1	1.260	1.260
			WINNIPEGOSIS	1	2.240	2.240				ROSERAY	2	1.200	1.200
1	12	W3	WINNIPEGOSIS-	1	3.080	3.080	5	14	W3	ROSERAY	1	2.340	2.340
			ASHERN-INTERLAKE	1	3.080	3.080	11	14	W3	CANTUAR	2	0.826 - 0.910	0.868
5	12	W3	MANNVILLE	1	1.750	1.750				ROSERAY	1	1.320	1.320
			ROSERAY	1	2.150	2.150	13	14	W3	CANTUAR	1	0.900	0.900
13	12	W3	MADISON (UNDIFF)	1	2.250	2.250	14	14	W3	CANTUAR	1	0.960	0.960
			BIRDBEAR	1	0.690	0.690				ROSERAY	1	0.950	0.950
			DUPEROW	1	1.080	1.080	17	14	W3	CANTUAR	2	1.390 - 1.400	1.395
			SOURIS RIVER-	1	2.170	2.170				ROSERAY	3	1.240 - 1.880	1.490
			DAWSON BAY-	1	1.950 - 2.050	2.000				BIRDBEAR	1	0.430	0.430
			WINNIPEGOSIS	1	1.950 - 2.050	2.000				DUPEROW	3	0.380 - 0.440	0.418
16	12	W3	CANTUAR	2	1.950 - 2.050	2.000				SOURIS RIVER	3	0.099 - 0.223	0.174
18	12	W3	CANTUAR	1	1.200	1.200				INTERLAKE	2	0.084 - 0.170	0.127
			ROSERAY	1	1.500	1.500				DEADWOOD	3	0.110 - 0.143	0.124
30	12	W3	MANNVILLE	1	0.930	0.930	18	14	W3	ROSERAY	2	1.280 - 1.570	1.425
			BIRDBEAR	1	0.950	0.950	19	14	W3	VIKING	1	0.570	0.570
37	12	W3	MANNVILLE	1	0.105	0.105				SPINNEY HILL	1	1.350	1.350
58	12	W3	SOURIS RIVER	1	0.203	0.203				MANNVILLE	1	1.400	1.400
60	12	W3	SOURIS RIVER	1	1.270	1.270				CANTUAR	1	1.060	1.060
			WINNIPEGOSIS	1	1.880	1.880	20	14	W3	VIKING	1	0.700	0.700
1	13	W3	MADISON (UNDIFF)	1	1.540	1.540	21	14	W3	VIKING	2	0.660 - 0.700	0.680
			BIRDBEAR	1	2.370	2.370							
			INTERLAKE	1	3.510	3.510							

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA TWP RGE MER	FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES	AREA TWP RGE MER	FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES
22 14 W3	VIKING	1	0.670	0.670	17 16 W3	ROSERAY	8	0.550 - 1.280	1.031
23 14 W3	VIKING	1	1.100	1.100		BIRDBEAR	1	0.820	0.820
26 14 W3	SPINNEY HILL	1	1.280	1.280		DUPEROW	3	0.076 - 0.500	0.225
29 14 W3	DUPEROW	1	0.163	0.163		INTERLAKE	1	0.059	0.059
35 14 W3	MANNVILLE	1	0.150	0.150	18 16 W3	MANNVILLE	1	0.710	0.710
46 14 W3	DAWSON BAY	1	0.061	0.061		UPPER SHAUNAVON	1	1.380	1.380
56 14 W3	WINNIPEGOSIS	1	0.370	0.370	19 16 W3	UPPER SHAUNAVON	1	1.220	1.220
	DEADWOOD	2	0.380 - 0.390	0.385		LOWER SHAUNAVON	1	1.210	1.210
58 14 W3	WINNIPEGOSIS	1	0.258	0.258	23 16 W3	LOWER COLORADO	1	0.580	0.580
63 14 W3	WINNIPEGOSIS	1	0.590	0.590		VIKING	1	0.480	0.480
12 15 W3	ROSERAY	1	0.830	0.830	24 16 W3	VIKING	2	0.740	0.740
15 15 W3	CANTUAR	1	0.840	0.840	26 16 W3	SPINNEY HILL	1	1.200	1.200
	ROSERAY	3	0.910 - 0.980	0.950	32 16 W3	BIRDBEAR	1	0.095	0.095
16 15 W3	CANTUAR	4	0.960 - 1.070	1.008	33 16 W3	MANNVILLE	1	0.160	0.160
	ROSERAY	2	0.670 - 0.835	0.753		BIRDBEAR	1	0.117	0.117
17 15 W3	MANNVILLE	3	1.100 - 1.720	1.307	34 16 W3	MANNVILLE	4	0.124 - 0.165	0.140
	CANTUAR	4	1.040 - 2.000	1.535		BAKKEN	1	0.128	0.128
	ROSERAY	3	1.780 - 2.230	1.953		BIRDBEAR	3	0.124 - 0.155	0.136
	UPPER SHAUNAVON	1	1.740	1.740	38 16 W3	MANNVILLE	2	0.145 - 0.148	0.147
	LOWER SHAUNAVON	3	1.250 - 1.600	1.380	45 16 W3	WINNIPEGOSIS	1	0.048	0.048
	MADISON (UNDIFF)	2	1.070 - 1.650	1.360	59 16 W3	MANNVILLE	2	1.520 - 1.970	1.745
18 15 W3	CANTUAR	1	2.050	2.050		DAWSON BAY	1	0.590	0.590
23 15 W3	VIKING	1	0.620	0.620		WINNIPEGOSIS	1	0.380	0.380
33 15 W3	INTERLAKE	1	0.057	0.057		DEADWOOD	1	0.310	0.310
34 15 W3	MANNVILLE	1	0.160	0.160	66 16 W3	MEADOW LAKE	1	0.212	0.212
	BIRDBEAR	1	0.099	0.099	2 17 W3	UPPER SHAUNAVON	1	0.395	0.395
51 15 W3	WINNIPEGOSIS	1	0.096	0.096		MADISON (UNDIFF)	1	1.700	1.700
60 15 W3	MANNVILLE	1	5.800	5.800	3 17 W3	BELLY RIVER	1	5.320	5.320
	DEADWOOD	1	0.300	0.300	6 17 W3	DAWSON BAY	1	1.400	1.400
61 15 W3	WINNIPEGOSIS	1	0.480	0.480	8 17 W3	CANTUAR	1	0.650	0.650
	DEADWOOD	1	0.420	0.420	9 17 W3	MADISON (UNDIFF)	1	1.850	1.850
64 15 W3	DEADWOOD	1	0.510	0.510	10 17 W3	BASAL MANNVILLE	1	0.540	0.540
68 15 W3	WINNIPEGOSIS	1	0.350 - 0.359	0.359		UPPER SHAUNAVON	1	0.562	0.562
	WINNIPEGOSIS-	1	0.284	0.284	11 17 W3	UPPER SHAUNAVON	4	0.587 - 0.810	0.697
	ASHERN	2	0.427 - 0.481	0.454	12 17 W3	BELLY RIVER	2	3.240 - 3.500	3.370
	MEADOW LAKE	2				UPPER SHAUNAVON	2	0.650 - 0.690	0.670
1 16 W3	UPPER SHAUNAVON	1	0.755	0.755	13 17 W3	ROSERAY	2	0.700 - 0.800	0.750
13 16 W3	CANTUAR	1	0.770	0.770	14 17 W3	ROSERAY	1	0.680	0.680
	BASAL MANNVILLE	1	0.690	0.690	15 17 W3	MANNVILLE	1	0.913	0.913
	ROSERAY	1	0.700	0.700		CANTUAR	9	0.530 - 0.730	0.637
14 16 W3	ROSERAY	1	0.667	0.667		BASAL CANTUAR	1	0.661	0.661
	LOWER ROSERAY	1	0.698	0.698		CANTUAR-ROSERAY	1	0.570	0.570
15 16 W3	CANTUAR	2	0.720 - 0.900	0.810		UPPER ROSERAY	1	0.902	0.902
	ROSERAY	4	0.780 - 1.630	1.135		ROSERAY	3	0.610 - 1.000	0.756
16 16 W3	MANNVILLE	5	0.880 - 1.830	1.146	16 17 W3	CANTUAR	2	0.820 - 0.880	0.850
	CANTUAR	2	0.935 - 0.960	0.948		ROSERAY	3	0.735 - 0.880	0.798
	BASAL CANTUAR	1	1.280	1.280		LOWER ROSERAY	2	0.880 - 0.900	0.890
	BASAL CANTUAR-	1	0.960	0.960		UPPER SHAUNAVON	1	0.860	0.860
	ROSERAY	11	0.745 - 1.400	0.989		MADISON (UNDIFF)	1	1.420	1.420
	LOWER SHAUNAVON	4	0.662 - 1.500	1.146		DUPEROW	3	0.062 - 0.700	0.313
						SOURIS RIVER	1	0.192	0.192
						WINNIPEGOSIS	1	0.067	0.067

RESISTIVITY OF FORMATION WATERS @ 20°C

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16 17 W3	INTERLAKE	2	0.069 - 0.071	0.070	17 18 W3	BELLY RIVER	1	2.050	2.050
17 17 W3	CANTUAR	4	0.850 - 1.120	0.985		MANNVILLE	4	0.660 - 1.150	0.820
	ROSERAY	1	1.410	1.410		CANTUAR	2	0.785 - 0.920	0.853
	UPPER SHAUNAVON	1	1.280	1.280		ROSERAY	11	0.790 - 1.380	0.912
18 17 W3	BELLY RIVER	2	2.600 - 6.500	4.550		BIRDBEAR	1	1.070	1.070
	CANTUAR	2	1.050 - 1.370	1.210		DUPEROW	5	0.080 - 0.200	0.132
	ROSERAY	28	0.610 - 2.700	1.274		SOURIS RIVER	2	0.080 - 0.090	0.085
	UPPER SHAUNAVON	5	1.060 - 1.764	1.415	18 18 W3	CANTUAR	2	0.870 - 0.960	0.915
	UPPER-LOWER SHAUNAVON	1	1.360	1.360		UPPER SHAUNAVON	3	0.785 - 1.330	1.122
19 17 W3	CANTUAR	5	0.835 - 1.180	0.953		LOWER SHAUNAVON	4	1.020 - 1.420	1.243
	ROSERAY	1	0.860	0.860	24 18 W3	VIKING	2	0.500 - 0.590	0.545
	UPPER SHAUNAVON	3	1.040 - 1.640	1.280	25 18 W3	VIKING	1	0.265	0.265
20 17 W3	CANTUAR	1	0.780	0.780	28 18 W3	MANNVILLE	1	0.920	0.920
22 17 W3	VIKING	1	0.610	0.610		VIKING	1	0.213	0.213
23 17 W3	VIKING	2	0.490 - 0.590	0.540	29 18 W3	STONY MOUNTAIN	1	0.050	0.050
24 17 W3	VIKING	3	0.490 - 0.660	0.572	32 18 W3	MANNVILLE	1	0.595	0.595
25 17 W3	VIKING	2	0.760 - 0.880	0.820		RAKKEN	1	0.580	0.580
	MANNVILLE	1	0.760	0.760	33 18 W3	MANNVILLE	3	0.340 - 0.373	0.351
26 17 W3	MADISON (UNDIFF)	1	0.400	0.400	46 18 W3	MANNVILLE	24	0.041 - 3.820	0.800
	WINNIPEGOSIS	1	0.049	0.049	49 18 W3	SOURIS RIVER	1	0.085	0.085
	ASHERN	1	0.047	0.047	51 18 W3	DAWSON BAY	1	0.072	0.072
27 17 W3	VIKING	1	0.853	0.853	55 18 W3	ST. WALBURG	1	0.374	0.374
28 17 W3	VIKING	1	1.110	1.110	4 19 W3	BELLY RIVER	1	2.300	2.300
31 17 W3	MANNVILLE	1	0.203	0.203	7 19 W3	MANNVILLE	1	0.670	0.670
46 17 W3	MANNVILLE	1	0.355	0.355		UPPER SHAUNAVON	2	0.345 - 0.410	0.378
47 17 W3	SPINNEY HILL	1	0.230	0.230	8 19 W3	BELLY RIVER	7	4.200 - 4.550	4.326
56 17 W3	DEADWOOD	2	0.151 - 0.152	0.152		UPPER SHAUNAVON	1	0.675	0.675
58 17 W3	MEADOW LAKE	1	0.440	0.440		SHAUNAVON	2	0.370 - 0.400	0.385
9 18 W3	RAVENS CRAG	1	7.900	7.900		LOWER SHAUNAVON	1	0.357	0.357
	BELLY RIVER	1	4.280	4.280	9 19 W3	BELLY RIVER	1	4.450	4.450
	UPPER SHAUNAVON	3	0.440 - 1.130	0.790		SHAUNAVON	1	0.430	0.430
10 18 W3	UPPER SHAUNAVON	1	1.300	1.300	10 19 W3	BELLY RIVER	1	2.400	2.400
	LOWER SHAUNAVON	2	0.415 - 0.620	0.518		UPPER SHAUNAVON	1	1.600	1.600
11 18 W3	BASAL MANNVILLE	1	0.540	0.540	11 19 W3	BELLY RIVER	1	3.300	3.300
	UPPER SHAUNAVON	2	0.460 - 0.490	0.475		UPPER SHAUNAVON	3	0.420 - 0.510	0.463
12 18 W3	ROSERAY	1	0.680	0.680	12 19 W3	BASAL CANTUAR	1	0.625	0.625
	UPPER SHAUNAVON	13	0.523 - 1.630	1.060		ROSERAY	2	0.560 - 0.580	0.570
13 18 W3	ROSERAY	3	0.520 - 0.810	0.673		UPPER SHAUNAVON	3	0.500 - 0.600	0.537
	UPPER SHAUNAVON	2	0.920 - 1.130	1.025	13 19 W3	BELLY RIVER	2	2.260 - 2.730	2.495
14 18 W3	ROSERAY	3	0.750 - 0.940	0.813		MANNVILLE	1	0.780	0.780
	BIRDBEAR	1	0.550	0.550		CANTUAR	3	0.530 - 0.600	0.557
	DUPEROW	3	0.108 - 0.540	0.264		BASAL CANTUAR	2	0.530	0.530
15 18 W3	MANNVILLE	1	0.710	0.710		ROSERAY	12	0.530 - 0.880	0.691
	CANTUAR	1	0.660	0.660		UPPER SHAUNAVON	11	0.540 - 0.923	0.721
	CANTUAR-ROSERAY	1	0.750	0.750		LOWER SHAUNAVON	1	0.600	0.600
	ROSERAY	6	0.580 - 0.840	0.727		GRAVELBOURG	2	0.690 - 0.796	0.743
	UPPER SHAUNAVON	4	0.715 - 0.850	0.794		MADISON (UNDIFF)	1	1.470	1.470
16 18 W3	MANNVILLE	1	0.760	0.760	14 19 W3	BELLY RIVER	1	2.200	2.200
	CANTUAR	6	0.560 - 0.870	0.653		MANNVILLE	2	0.610	0.610
	BASAL CANTUAR	1	0.500	0.500		CANTUAR	1	0.460	0.460
	ROSERAY	9	0.560 - 0.900	0.734		BASAL CANTUAR	1	0.581	0.581
						ROSERAY	7	0.412 - 0.800	0.654
						UPPER SHAUNAVON	7	0.505 - 1.080	0.728
						GRAVELBOURG	1	0.555	0.555
						BIRDBEAR	1	0.124	0.124
						DUPEROW	5	0.046 - 0.178	0.104

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES		AVERAGE RESISTIVITY OHM-METRES	AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES		AVERAGE RESISTIVITY OHM-METRES
TWP	RGE	MER						TWP	RGE	MER					
15	19	W3	BELLY RIVER	1	2.520		2.520	6	20	W3	GRAVELBOURG	1	0.165		0.165
			MANNVILLE	1	0.670		0.670	7	20	W3	BELLY RIVER	2	2.050 - 2.200		2.125
			BASAL MANNVILLE	1	0.542		0.542				VIKING	2	0.600 - 0.610		0.605
			UPPER SHAUNAVON	4	0.500 - 0.690		0.560				MANNVILLE	1	0.600		0.600
			LOWER SHAUNAVON	1	0.690		0.690				UPPER SHAUNAVON	3	0.460 - 0.580		0.527
16	19	W3	MANNVILLE	1	0.750		0.750				LOWER SHAUNAVON	1	0.700		0.700
			CANTUAR	1	0.750		0.750	11	20	W3	UPPER SHAUNAVON	1	0.560		0.560
			BASAL MANNVILLE	2	0.450 - 0.550		0.500				LOWER SHAUNAVON	1	0.420		0.420
			ROSERAY	6	0.420 - 0.880		0.674	12	20	W3	UPPER SHAUNAVON	1	0.700		0.700
			UPPER SHAUNAVON	4	0.590 - 0.900		0.761	13	20	W3	CANTUAR	1	0.570		0.570
			LOWER SHAUNAVON	1	1.200		1.200				UPPER SHAUNAVON	4	0.440 - 0.800		0.557
17	19	W3	ROSERAY	2	0.675 - 0.860		0.768				MADISON (UNDIFF)	1	0.480		0.480
			LOWER ROSERAY	1	0.970		0.970	14	20	W3	ROSERAY	2	0.605 - 1.020		0.813
			UPPER SHAUNAVON	2	0.640 - 0.950		0.795				UPPER SHAUNAVON	3	0.540 - 0.615		0.588
18	19	W3	BASAL MANNVILLE- UPPER SHAUNAVON	1	0.950		0.950	15	20	W3	UPPER SHAUNAVON	2	0.720 - 0.780		0.750
			UPPER SHAUNAVON	2	0.690 - 0.830		0.760	16	20	W3	UPPER SHAUNAVON	3	0.540 - 0.720		0.637
21	19	W3	VIKING	1	0.530		0.530	17	20	W3	ROSERAY	1	0.558		0.558
22	19	W3	BASAL CANTUAR	1	0.582		0.582				UPPER SHAUNAVON	1	0.790		0.790
25	19	W3	VIKING	3	0.590 - 0.640		0.621				UPPER-LOWER SHAUNAVON	1	0.560		0.560
28	19	W3	VIKING	1	0.825		0.825	21	20	W3	VIKING	1	0.490		0.490
29	19	W3	MANNVILLE	1	1.110		1.110				SOURIS RIVER	1	0.054		0.054
31	19	W3	VIKING	1	0.725		0.725	22	20	W3	MANNVILLE	1	0.323		0.323
			SPINNEY HILL	1	0.740		0.740	23	20	W3	VIKING	1	0.494		0.494
32	19	W3	MANNVILLE	5	0.445 - 0.777		0.574	28	20	W3	VIKING	2	0.421 - 0.480		0.451
			THREE FORKS	1	0.440		0.440	31	20	W3	BELLY RIVER	1	3.640		3.640
35	19	W3	MANNVILLE	1	0.301		0.301				MANNVILLE	2	0.463 - 0.541		0.502
36	19	W3	DUPEROW	4	0.242 - 0.814		0.598	32	20	W3	MANNVILLE	6	0.362 - 0.734		0.548
37	19	W3	MANNVILLE	11	0.276 - 0.822		0.407				BAKKEN	1	0.362		0.362
38	19	W3	MANNVILLE	1	0.300		0.300	33	20	W3	MANNVILLE	8	0.373 - 0.469		0.411
39	19	W3	BASAL MANNVILLE	2	0.240 - 0.242		0.241	36	20	W3	DUPEROW	1	0.140		0.140
40	19	W3	VIKING	1	0.410		0.410	37	20	W3	MANNVILLE	1	0.305		0.305
			MANNVILLE	4	0.267 - 0.335		0.295	38	20	W3	MANNVILLE	2	0.453 - 0.480		0.467
			UNITY	1	0.340		0.340	39	20	W3	MANNVILLE	5	0.329 - 0.765		0.450
45	19	W3	MANNVILLE	26	0.109 - 0.200		0.129	40	20	W3	MANNVILLE	1	0.318		0.318
48	19	W3	MANNVILLE	36	0.012 - 2.150		0.472	41	20	W3	MANNVILLE	3	0.085 - 0.530		0.310
58	19	W3	WINNIPEGOSIS	1	0.252		0.252	43	20	W3	MANNVILLE	2	0.083 - 0.120		0.102
			DEADWOOD	1	0.147		0.147	44	20	W3	MANNVILLE	2	0.118 - 0.420		0.269
60	19	W3	MANNVILLE	1	2.390		2.390	48	20	W3	MANNVILLE	21	0.121 - 0.300		0.173
63	19	W3	WINNIPEGOSIS	1	0.186		0.186	49	20	W3	MANNVILLE	6	0.122 - 0.203		0.151
2	20	W3	UPPER SHAUNAVON	1	1.020		1.020				DEADWOOD	1	0.042		0.042
			MADISON (UNDIFF)	1	0.709		0.709	50	20	W3	MANNVILLE	2	0.117 - 0.168		0.143
3	20	W3	VIKING	1	0.580		0.580				SOURIS RIVER	1	0.085		0.085
			CANTUAR	1	0.710		0.710				DAWSON BAY	1	0.056		0.056
			BASAL MANNVILLE	1	0.720		0.720	51	20	W3	MANNVILLE	4	0.161 - 0.165		0.163
			UPPER SHAUNAVON	1	0.494		0.494	54	20	W3	CUMMINGS	1	1.180		1.180
4	20	W3	BELLY RIVER	2	4.500 - 4.660		4.580	57	20	W3	MANNVILLE	1	3.320		3.320
			UPPER SHAUNAVON	3	0.310 - 0.421		0.361								
5	20	W3	BELLY RIVER	3	1.840 - 2.400		2.057								
			UPPER SHAUNAVON	5	0.280 - 0.390		0.338								
6	20	W3	SHAUNAVON	1	0.350		0.350								

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES	AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES
TWP	RGE	MER					TWP	RGE	MER				
60	20	W3	SOURIS RIVER	1	0.470	0.470	58	21	W3	MANNVILLE	1	1.300	1.300
			WINNIPEGOSIS	1	0.170	0.170	61	21	W3	ST. WALBURG	1	0.500	0.500
			DEADWOOD	2	0.100 - 0.130	0.115	63	21	W3	WINNIPEGOSIS	1	0.121	0.121
61	20	W3	MANNVILLE	1	1.530	1.530	1	22	W3	UPPER SHAUNAVON	1	0.605	0.605
			WINNIPEGOSIS	1	0.123	0.123	2	22	W3	UPPER SHAUNAVON	1	1.050	1.050
62	20	W3	MANNVILLE	1	1.620	1.620	6	22	W3	SOURIS RIVER	1	0.100	0.100
1	21	W3	BELLY RIVER	1	4.460	4.460				DAWSON BAY	1	0.090	0.090
2	21	W3	UPPER SHAUNAVON	1	0.720	0.720				STONEWALL	1	0.060	0.060
3	21	W3	UPPER SHAUNAVON	1	0.790	0.790				RED RIVER	1	0.060	0.060
			MADISON (UNDIFF)	1	0.192	0.192				DEADWOOD	1	1.300	1.300
4	21	W3	UPPER SHAUNAVON	1	0.570	0.570	7	22	W3	UPPER SHAUNAVON	1	0.435	0.435
7	21	W3	UPPER SHAUNAVON	2	0.445 - 0.460	0.453	9	22	W3	LOWER SHAUNAVON	1	1.080	1.080
10	21	W3	UPPER SHAUNAVON	1	0.515	0.515	10	22	W3	VIKING	1	0.530	0.530
			UPPER-LOWER SHAUNAVON	1	0.520	0.520				UPPER SHAUNAVON	1	0.745	0.745
11	21	W3	UPPER SHUANAVON	1	0.725	0.725	11	22	W3	UPPER-LOWER SHAUNAVON	1	0.699	0.699
13	21	W3	VIKING	1	0.495	0.495	13	22	W3	UPPER SHAUNAVON	2	0.510 - 0.570	0.540
			UPPER SHAUNAVON	1	0.520	0.520	14	22	W3	UPPER SHAUNAVON	3	0.480 - 0.620	0.544
14	21	W3	UPPER SHAUNAVON	1	0.483	0.483	16	22	W3	MANNVILLE	1	0.760	0.760
17	21	W3	UPPER-LOWER SHAUNAVON	1	0.560	0.560	20	22	W3	VIKING	1	0.590	0.590
18	21	W3	GRAVELBOURG	1	0.740	0.740	22	22	W3	LOWER SHAUNAVON- GRAVELBOURG	1	0.678	0.678
			BIRDBEAR	1	0.580	0.580	23	22	W3	VIKING	1	0.460	0.460
22	21	W3	VIKING	2	0.495 - 0.560	0.528	24	22	W3	BAKKEN	1	0.430	0.430
			MADISON (UNDIFF)	1	0.503	0.503	26	22	W3	VIKING	1	0.440	0.440
			BAKKEN	1	0.485	0.485				MANNVILLE	1	0.680	0.680
26	21	W3	VIKING	1	0.420	0.420	28	22	W3	VIKING	1	0.395	0.395
28	21	W3	VIKING	1	0.357	0.357	30	22	W3	VIKING	5	0.460 - 0.479	0.468
32	21	W3	RIBSTONE CREEK	1	1.370	1.370	31	22	W3	RIBSTONE CREEK	1	1.740	1.740
			MANNVILLE	1	0.408	0.408	32	22	W3	SPINNEY HILL- MANNVILLE	4	0.382 - 0.580	0.512
33	21	W3	MANNVILLE	9	0.392 - 0.692	0.515				BAKKEN	4	0.571 - 0.720	0.644
34	21	W3	MANNVILLE	6	0.313 - 1.020	0.806	33	22	W3	MANNVILLE	2	0.503 - 0.555	0.529
			BIRDBEAR	1	0.300	0.300				MANNVILLE	1	0.495	0.495
35	21	W3	MANNVILLE	3	1.750 - 2.300	2.150				DUPEROW	1	0.220	0.220
			BIRDBEAR	1	0.330	0.330	34	22	W3	MANNVILLE	1	0.353	0.353
			DUPEROW	1	0.166	0.166	39	22	W3	MANNVILLE	2	0.317 - 0.703	0.510
38	21	W3	MANNVILLE	1	0.324	0.324	43	22	W3	DUPEROW	1	0.230	0.230
40	21	W3	MANNVILLE	3	0.329 - 0.452	0.371				WINNIPEGOSIS	1	0.055	0.055
47	21	W3	MANNVILLE	1	0.171	0.171	44	22	W3	MANNVILLE	1	0.120	0.120
48	21	W3	MANNVILLE	4	0.121 - 0.169	0.146	45	22	W3	MANNVILLE	11	0.103 - 0.714	0.288
49	21	W3	MANNVILLE	2	0.801 - 1.140	0.971				WINNIPEGOSIS	1	0.050	0.050
51	21	W3	SOURIS RIVER	1	0.144	0.144	46	22	W3	MANNVILLE	2	0.130 - 0.149	0.140
			WINNIPEGOSIS	1	0.057	0.057	47	22	W3	MANNVILLE	1	0.147	0.147
52	21	W3	MANNVILLE	3	0.187 - 0.194	0.191	48	22	W3	MANNVILLE	1	0.145	0.145
55	21	W3	SOURIS RIVER	1	0.185	0.185							
56	21	W3	MANNVILLE	1	1.120	1.120							
57	21	W3	MEADOW LAKE	1	0.130	0.130							

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES	AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES
TWP	RGE	MER					TWP	RGE	MER				
51	22	W3	MANNVILLE	1	0.162	0.162	56	23	W3	WINNIPEGOSIS DEADWOOD	1 1	0.120 0.068	0.120 0.068
60	22	W3	SOURIS RIVER	1	0.395	0.395	58	23	W3	SPARKY	1	1.110	1.110
62	22	W3	SOURIS RIVER	1	0.530	0.530	59	23	W3	SOURIS RIVER	1	0.725	0.725
			WINNIPEGOSIS	1	0.120	0.120				WINNIPEGOSIS	1	0.200	0.200
			DEADWOOD	1	0.086	0.086							
65	22	W3	MANNVILLE	1	4.300	4.300	66	23	W3	SOURIS RIVER	2	0.062 - 0.084	0.073
										WINNIPEGOSIS	1	0.065	0.065
5	23	W3	UPPER SHAUNAVON	2	0.340 - 0.614	0.477	1	24	W3	UPPER SHAUNAVON	1	1.280	1.280
			LOWER SHAUNAVON	1	0.352	0.352				MADISON (UNDIFF)	1	1.338	1.338
7	23	W3	UPPER SHAUNAVON	1	0.801	0.801	2	24	W3	VIKING	1	0.720	0.720
9	23	W3	UPPER SHAUNAVON	1	0.690	0.690				MANNVILLE	1	1.330	1.330
10	23	W3	UPPER SHAUNAVON	1	0.700	0.700				UPPER SHAUNAVON	5	1.120 - 1.560	1.384
12	23	W3	VIKING	3	0.560 - 0.710	0.613				UPPER-LOWER	1	2.130	2.130
			CANTUAR	1	0.720	0.720				SHAUNAVON	1	1.430	1.430
			UPPER SHAUNAVON	2	0.600 - 0.720	0.660				MADISON (UNDIFF)	1		
13	23	W3	UPPER SHAUNAVON	2	0.590 - 0.710	0.650	4	24	W3	UPPER SHAUNAVON	1	0.740	0.740
14	23	W3	UPPER SHAUNAVON	1	0.780	0.780	7	24	W3	UPPER-LOWER	1		
16	23	W3	MADISON (UNDIFF)	1	0.780	0.780				SHAUNAVON	1	1.039	1.039
17	23	W3	SHAUNAVON	1	0.680	0.680	8	24	W3	UPPER-LOWER	1	0.565	0.565
			MADISON (UNDIFF)	1	0.720	0.720				SHAUNAVON	1	0.840	0.840
21	23	W3	VIKING	1	0.680	0.680	14	24	W3	UPPER SHAUNAVON	1	0.840	0.840
26	23	W3	VIKING	1	0.570	0.570	15	24	W3	VIKING	1	0.660	0.660
27	23	W3	VIKING	2	0.358 - 0.580	0.469				MANNVILLE	1	0.880	0.880
29	23	W3	BELLY RIVER	1	2.870	2.870	20	24	W3	DUPEROW	1	0.177	0.177
30	23	W3	BAKKEN	1	0.480	0.480	21	24	W3	VIKING	1	0.699	0.699
			BAKKEN-							UPPER-LOWER	1	0.400	0.400
			BTG VALLEY	1	0.356	0.356				SHAUNAVON	2	0.350 - 0.811	0.581
			BIRDBEAR	1	0.280	0.280				GRAVELBOURG			
31	23	W3	BELLY RIVER	1	5.377	5.377	23	24	W3	VIKING	3	0.505 - 0.565	0.525
			VIKING	1	0.480	0.480	27	24	W3	MANNVILLE	1	0.565	0.565
			BAKKEN	2	0.377 - 0.444	0.411	29	24	W3	VIKING	1	0.370	0.370
			BIRDBEAR	1	0.370	0.370	30	24	W3	VIKING	1	0.630	0.630
32	23	W3	BIRDBEAR	1	0.202	0.202	31	24	W3	BAKKEN	4	0.361 - 0.843	0.516
33	23	W3	MANNVILLE	4	0.349 - 0.365	0.353	32	24	W3	MANNVILLE	1	0.320	0.320
39	23	W3	MANNVILLE	3	0.310 - 0.403	0.342				BAKKEN	6	0.287 - 0.721	0.439
43	23	W3	DUPEROW	1	0.205	0.205	33	24	W3	MANNVILLE	1	0.370	0.370
44	23	W3	MCLAREN	1	0.470	0.470	34	24	W3	BIRDBEAR	1	0.320	0.320
45	23	W3	WINNIPEGOSIS	1	0.055	0.055	35	24	W3	TORQUAY	3	0.301 - 0.494	0.368
46	23	W3	MANNVILLE	1	0.105	0.105	39	24	W3	MANNVILLE	1	0.202	0.202
47	23	W3	MANNVILLE	4	0.099 - 0.120	0.113				BIRDBEAR	1	0.385	0.385
48	23	W3	MANNVILLE	1	0.100	0.100	41	24	W3	MANNVILLE	2	0.229 - 0.274	0.252
49	23	W3	MANNVILLE	22	0.072 - 0.250	0.109	44	24	W3	MANNVILLE	3	0.140 - 0.239	0.176
50	23	W3	MANNVILLE	1	0.142	0.142				WINNIPEGOSIS	1	0.046	0.046
51	23	W3	MANNVILLE	10	0.130 - 0.300	0.195	45	24	W3	MANNVILLE	2	0.350 - 0.540	0.465
52	23	W3	MANNVILLE	16	0.160 - 0.280	0.200	51	24	W3	DEADWOOD	1	0.048	0.048
56	23	W3	SOURIS RIVER	1	0.500	0.500	59	24	W3	MANNVILLE	1	1.600	1.600
							1	25	W3	BIRDBEAR	1	1.120	1.120
										DUPEROW	2	1.140 - 1.530	1.335

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA	FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES	AREA	FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES
TWP RGE MER					TWP RGE MER				
5 25 W3	DUPEROW	1	0.940	0.940	3 26 W3	MADISON (UNDIFF)	2	0.535 - 1.040	0.788
	SOURIS RIVER	1	1.330	1.330	5 26 W3	UPPER SHAUNAVON	1	0.935	0.935
6 25 W3	UPPER SHAUNAVON	1	1.100	1.100	8 26 W3	UPPER SHAUNAVON	1	1.229	1.229
8 25 W3	UPPER-LOWER SHAUNAVON	1	0.796	0.796		BIRDBEAR	1	2.080	2.080
9 25 W3	UPPER SHAUNAVON	1	0.910	0.910		DUPEROW	1	0.890	0.890
12 25 W3	UPPER SHAUNAVON	1	0.940	0.940	9 26 W3	VIKING	1	0.930	0.930
	LOWER SHAUNAVON	1	0.920	0.920		UPPER SHAUNAVON	1	1.330	1.330
13 25 W3	VIKING	1	0.980	0.980	10 26 W3	UPPER-LOWER SHAUNAVON	1	1.210	1.210
	ROSERAY	1	0.970	0.970	11 26 W3	VIKING	1	1.200	1.200
	LOWER SHAUNAVON	1	1.440	1.440		MADISON (UNDIFF)	1	0.950	0.950
	MADISON (UNDIFF)	1	0.700	0.700	13 26 W3	UPPER SHAUNAVON	1	1.150	1.150
22 25 W3	DUPEROW	1	0.050	0.050	17 26 W3	UPPER SHAUNAVON	1	0.790	0.790
24 25 W3	VIKING	5	0.510 - 0.768	0.622		GRAVELBOURG	1	0.800	0.800
25 25 W3	BAKKEN	1	0.610	0.610	18 26 W3	VIKING	1	0.675	0.675
27 25 W3	VIKING	1	0.400	0.400		MANNVILLE	1	0.830	0.830
	BIRDBEAR	1	0.230	0.230		MADISON (UNDIFF)	1	0.870	0.870
29 25 W3	BIRDBEAR	1	0.462	0.462	24 26 W3	VIKING	2	0.320 - 0.455	0.388
30 25 W3	BELLY RIVER	1	2.710	2.710	25 26 W3	VIKING	3	0.450 - 0.525	0.480
31 25 W3	LEA PARK	2	3.800 - 3.920	3.860	28 26 W3	MANNVILLE	1	0.495	0.495
	VIKING	7	0.500 - 0.600	0.524		BIRDBEAR	1	0.257	0.257
	BAKKEN	2	0.420 - 0.510	0.465	29 26 W3	VIKING	1	0.343	0.343
32 25 W3	BAKKEN	2	0.550 - 0.792	0.671		BAKKEN	1	0.380	0.380
33 25 W3	BAKKEN	2	0.484 - 0.540	0.512		BIRDBEAR	1	0.286	0.286
35 25 W3	MANNVILLE	3	0.348 - 0.599	0.432	30 26 W3	BAKKEN	2	0.371 - 0.424	0.398
36 25 W3	BAKKEN	6	0.168 - 0.432	0.365	31 26 W3	MANNVILLE	4	0.170 - 0.365	0.298
38 25 W3	MANNVILLE	2	0.365 - 0.376	0.371		BAKKEN	2	0.342 - 0.350	0.346
39 25 W3	MANNVILLE	4	0.127 - 0.682	0.317		BIRDBEAR	1	0.164	0.164
42 25 W3	MANNVILLE	5	0.130 - 0.229	0.186	32 26 W3	MANNVILLE	1	0.360	0.360
43 25 W3	MANNVILLE	2	0.488 - 1.000	0.744	33 26 W3	MANNVILLE	2	0.303 - 0.332	0.318
45 25 W3	MANNVILLE	2	0.297 - 0.300	0.299		BAKKEN	1	0.350	0.350
46 25 W3	MANNVILLE	2	0.097 - 0.200	0.149	35 26 W3	MANNVILLE	6	0.315 - 0.451	0.354
48 25 W3	SPARKY	1	0.092	0.092		BAKKEN	1	0.350	0.350
52 25 W3	MANNVILLE	3	0.178 - 0.328	0.252	36 26 W3	MANNVILLE	6	0.322 - 0.617	0.443
53 25 W3	ST. WALBURG	1	0.172	0.172		BAKKEN	1	0.500	0.500
	MANNVILLE	2	0.160 - 0.212	0.186	37 26 W3	MANNVILLE	3	0.280 - 0.365	0.324
54 25 W3	MANNVILLE	2	0.288 - 0.294	0.291	39 26 W3	MANNVILLE	4	0.127 - 0.258	0.191
62 25 W3	SOURIS RIVER	1	0.740	0.740	40 26 W3	MANNVILLE	4	0.201 - 0.348	0.239
	WINNIPEGOSIS	1	0.060	0.060	41 26 W3	DUPEROW	1	0.152	0.152
63 25 W3	MANNVILLE	1	1.220	1.220	42 26 W3	MANNVILLE	4	0.222 - 0.365	0.278
64 25 W3	MANNVILLE	1	1.200	1.200	44 26 W3	MANNVILLE	20	0.098 - 0.133	0.116
65 25 W3	MANNVILLE	1	3.200	3.200	45 26 W3	MANNVILLE	1	0.183	0.183
77 25 W3	DAWSON BAY	1	0.153	0.153	46 26 W3	MANNVILLE	15	0.085 - 0.492	0.177
3 26 W3	RIBSTONE CREEK	1	1.240	1.240	47 26 W3	MANNVILLE	7	0.104 - 0.393	0.201
	UPPER SHAUNAVON	1	1.030	1.030	49 26 W3	DINA	2	0.153 - 0.180	0.167
					50 26 W3	RIBSTONE CREEK	1	5.060	5.060
						SPARKY	2	0.094 - 0.101	0.098

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA TWP RGE MER	FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES	AREA TWP RGE MER	FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES OHM-METRES	AVERAGE RESISTIVITY OHM-METRES
53 26 W3	COLONY	1	0.200	0.200	22 27 W3	VIKING	1	0.556	0.556
54 26 W3	MANNVILLE	2	0.129 - 0.246	0.188	25 27 W3	VIKING	3	0.500 - 0.520	0.507
	COLONY	1	0.196	0.196	29 27 W3	BIRDBEAR	1	0.276	0.276
	DUPEROW	1	0.216	0.216	30 27 W3	VIKING	1	0.360	0.360
	SOURIS RIVER	4	0.077 - 0.295	0.220		DETRITAL	1	0.365	0.365
	SOURIS RIVER- DAWSON BAY	1	0.062	0.062	31 27 W3	RIBSTONE CREEK	1	0.871	0.871
	WINNIPEGOSIS	1	0.051	0.051		MANNVILLE	1	0.390	0.390
	WINNIPEGOSIS- ASHERN-					BAKKEN	3	0.314 - 0.425	0.351
	MEADOW LAKE	1	0.051	0.051	32 27 W3	LEA PARK	1	1.320	1.320
	RED RIVER	1	0.051	0.051		RIBSTONE CREEK	1	1.920	1.920
	DEADWOOD	2	0.051	0.051		MANNVILLE	1	0.427	0.427
55 26 W3	SOURIS RIVER	1	0.160	0.160		BAKKEN	6	0.268 - 0.410	0.323
58 26 W3	SOURIS RIVER	1	0.162	0.162	33 27 W3	MANNVILLE	4	0.337 - 0.605	0.466
62 26 W3	COLONY	1	0.660	0.660	34 27 W3	MANNVILLE	1	0.383	0.383
	CUMMINGS-DINA	1	1.520	1.520		BAKKEN	4	0.271 - 0.346	0.307
64 26 W3	MANNVILLE	2	4.600 - 5.000	4.800	35 27 W3	MANNVILLE	3	0.308 - 0.398	0.343
65 26 W3	MANNVILLE	1	2.040	2.040	36 27 W3	MANNVILLE	1	0.393	0.393
	WINNIPEGOSIS	1	0.048	0.048		BAKKEN	1	0.312	0.312
79 26 W3	WINNIPEGOSIS	1	0.179	0.179	38 27 W3	MANNVILLE	2	0.197 - 0.290	0.244
2 27 W3	MILK RIVER	1	0.523	0.523	39 27 W3	MANNVILLE	15	0.110 - 0.270	0.164
	UPPER SHAUNAVON	1	1.550	1.550	40 27 W3	MANNVILLE	4	0.113 - 0.156	0.125
	LOWER				44 27 W3	MANNVILLE	3	0.100 - 0.168	0.124
	GRAVELBOURG	1	1.340	1.340	45 27 W3	MANNVILLE	11	0.100 - 0.267	0.145
	MADISON (UNDIFF)	2	1.425 - 2.000	1.713	47 27 W3	SPARKY	1	0.091	0.091
3 27 W3	UPPER SHAUNAVON	1	1.030	1.030		G.P.	1	0.089	0.089
	UPPER-LOWER				48 27 W3	RIBSTONE CREEK	1	4.000	4.000
	SHAUNAVON	1	1.400	1.400	49 27 W3	SPARKY	1	0.100	0.100
	MADISON (UNDIFF)	3	0.620 - 1.120	0.850	50 27 W3	SPARKY	1	0.075	0.075
	DUPEROW	1	0.940	0.940	51 27 W3	MCLAREN	1	0.154	0.154
5 27 W3	UPPER SHAUNAVON	2	0.810 - 0.955	0.883		WINNIPEGOSIS-			
	DUPEROW	2	0.064 - 0.320	0.192		ASHERN-INTERLAKE	1	0.057	0.057
6 27 W3	MILK RIVER	2	0.640 - 1.700	1.170	52 27 W3	MANNVILLE	4	0.102 - 0.215	0.132
	UPPER SHAUNAVON	1	0.970	0.970	53 27 W3	MANNVILLE	2	0.120 - 0.380	0.250
8 27 W3	MILK RIVER	2	0.425 - 0.560	0.493		DUPEROW	1	0.380	0.380
	SECOND					SOURIS RIVER	1	0.120	0.120
	WHITE SPECKS	1	0.470	0.470	55 27 W3	MANNVILLE	2	0.137 - 0.300	0.219
	GRAVELBOURG-				1 28 W3	VIKING	1	1.250	1.250
	MADISON	1	0.785	0.785		MADISON (UNDIFF)	1	2.520	2.520
10 27 W3	MANNVILLE	1	0.880	0.880		BIRDBEAR	1	1.080	1.080
	UPPER SHAUNAVON	1	1.130	1.130	2 28 W3	GRAVELBOURG	1	1.500	1.500
	MADISON (UNDIFF)	1	0.625	0.625	4 28 W3	UPPER-LOWER			
11 27 W3	UPPER SHAUNAVON	1	1.300	1.300		SHAUNAVON	1	1.040	1.040
	MADISON (UNDIFF)	1	0.803	0.803	5 28 W3	VIKING	1	0.920	0.920
13 27 W3	DUPEROW	1	0.069	0.069		UPPER SHAUNAVON	1	1.000	1.000
	WINNIPEGOSIS	1	0.047	0.047	6 28 W3	VIKING	1	0.938	0.938
	STONEWALL-					UPPER SHAUNAVON	1	1.580	1.580
	STONY MOUNTAIN	1	0.048	0.048		LOWER SHAUNAVON	1	1.200	1.200
14 27 W3	VIKING	1	0.950	0.950	7 28 W3	UPPER SHAUNAVON	1	1.520	1.520
	LOWER SHAUNAVON	1	0.930	0.930					
	DUPEROW	2	0.061 - 0.067	0.064					
	WINNIPEGOSIS	1	0.050	0.050					
16 27 W3	LOWER SHAUNAVON	1	0.860	0.860					
18 27 W3	LOWER SHAUNAVON	1	0.900	0.900					
	GRAVELBOURG	1	0.790	0.790					
19 27 W3	VIKING	1	0.572	0.572					

RESISTIVITY OF FORMATION WATERS @ 20°C

AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES		AVERAGE RESISTIVITY OHM-METRES	AREA			FORMATION OR HORIZON	NUMBER OF SAMPLES	RANGE OF RESISTIVITIES		AVERAGE RESISTIVITY OHM-METRES
TWP	RGE	MER			OHM-METRES	OHM-METRES		TWP	RGE	MER			OHM-METRES	OHM-METRES	
10	28	W3	VIKING	1	1.340	1.340		32	29	W3	MANNVILLE	1	0.345	0.345	
11	28	W3	MEDICINE HAT	1	0.680	0.680		37	29	W3	MANNVILLE	2	0.233 - 0.342	0.288	
			MADISON (UNDIFF)	1	0.850	0.850									
12	28	W3	MEDICINE HAT	3	0.530 - 0.570	0.557		13	30	W3	MEDICINE HAT	1	0.520	0.520	
18	28	W3	DUPEROW	3	0.110 - 0.160	0.135					VIKING	1	0.840	0.840	
			DEADWOOD	2	0.200 - 0.420	0.310									
19	28	W3	JURASSIC-												
			MADISON (UNDIFF)	1	0.600	0.600									
22	28	W3	BAKKEN	1	0.548	0.548									
			DUPEROW	1	0.063	0.063									
23	28	W3	VIKING	1	0.535	0.535									
			BAKKEN	1	1.040	1.040									
25	28	W3	VIKING	2	0.450 - 0.560	0.505									
28	28	W3	VIKING	1	0.320	0.320									
30	28	W3	BAKKEN	1	0.425	0.425									
31	28	W3	MANNVILLE	1	0.355	0.355									
32	28	W3	MANNVILLE	9	0.319 - 0.457	0.358									
			BAKKEN	3	0.320 - 0.570	0.407									
33	28	W3	MANNVILLE	1	0.400	0.400									
			BAKKEN	1	0.336	0.336									
34	28	W3	MANNVILLE	5	0.339 - 0.510	0.395									
			BAKKEN	1	0.376	0.376									
35	28	W3	MANNVILLE	5	0.170 - 0.616	0.366									
			BAKKEN	1	0.312	0.312									
36	28	W3	MANNVILLE	8	0.296 - 0.492	0.341									
37	28	W3	MANNVILLE	1	0.190	0.190									
38	28	W3	MANNVILLE	1	0.260	0.260									
39	28	W3	MANNVILLE	7	0.130 - 0.168	0.145									
42	28	W3	MANNVILLE	2	0.095 - 0.500	0.298									
43	28	W3	SPARKY	1	0.097	0.097									
44	28	W3	SPARKY	1	0.147	0.147									
1	29	W3	VIKING	1	1.580	1.580									
			BIRDBEAR	1	1.200	1.200									
2	29	W3	MADISON (UNDIFF)	1	1.620	1.620									
			BIRDBEAR	1	0.850	0.850									
6	29	W3	MILK RIVER	1	0.730	0.730									
			GRAVELBOURG	1	1.280	1.280									
9	29	W3	VIKING	1	2.350	2.350									
			UPPER SHAUNAVON	1	1.550	1.550									
			LOWER												
			GRAVELBOURG	1	1.380	1.380									
11	29	W3	VIKING	2	1.050 - 1.120	1.085									
			GRAVELBOURG	1	1.300	1.300									
12	29	W3	MEDICINE HAT	1	0.462	0.462									
25	29	W3	VIKING	3	0.380 - 0.410	0.397									
			DETRITAL	1	0.560	0.560									
			BAKKEN	1	0.465	0.465									
27	29	W3	VIKING	1	0.280	0.280									